# Tensions between research and teaching in higher education


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**Abstract** — *Higher education in the UK has undergone dramatic and far -reaching change over the last four and, particularly, the last two, decades. The 1963 Robbins Report on higher education proposed, inter alia, more than doubling full-time student numbers, (to 560,000), by 1980. This marked the beginning of rapid expansion of higher education. The current labour government is calling for further expansion in higher education with an aim to have 50% of 18 – 30 year olds enrolled in higher education by 2010. For the past fifteen years, research in UK universities has been assessed, for funding purposes, through successive Research Assessment Exercises, (RAE's). The '86 and '89 exercises were limited to the then universities, i.e. before the abolition of the bina ry divide between polytechnics and universities. The first quasi -universal exercise took place in 1992 when the polytechnics and some colleges of HE joined the university sector and became eligible for research funding. Elton, [1] reports (p 275) that 'Not a single institution failed to obtain research funds in the 1992 exercise for some of its departments…', i.e. a greater number of institutions were now competing for research funding and research funding was distributed amongst a greater number of insti tutions. The requirements for the 2008 RAE focus the rating on the contribution of individual staff rather than rating a department. The November 1993 'Autumn Statement' on funding introduced the imposition of financial penalties on Universities for und er- or over - recruiting students in an effort to stabilise student numbers and escalating costs. 1997 saw the publication of the Dearing repo rt which recommends, inter alia: the expansion of Higher Education, greater selectivity in research, and the profe ssionalism of teaching.*

*Throughout this period and within the legislation, was an underlying push towards increasing managerialism in higher education. One of the consequences of these factors, along with the separation of funding for teaching and resear ch, is a perceived separation of the two processes of teaching and research which, to provide quality education, should actually complement each other. This separation of the processes and the separation of their funding could lead to a tension between research and teaching and many academics argue both info rmally and formally [1,2,3] that this state of tension has, in fact, existed for some time. It has become increasingly common to refer to 'research active' academics as a term for those undertaking mai nly research and contributing to the RAE, with a counter -reference to 'non -research active' academics, a negative term, for those who mainly pursue those activities directly associated with the education of the bulk of students. It is within this context t hat this paper will examine the effects of the division and tension between teaching and research amongst the academic community of practice and the resultant impact on student learning.*



***Index Terms*** *higher education, research, teaching, tensions*


### INTRODUCTION

For the purposes of this paper, the term 'teaching' encompasses those matters which impact on the undergraduate teaching and learning experience at university. The term 'research' encompasses those matters relating to the research assessment exercise and to analogous research activities such as technology transfer, spin-out companies and academic enterprise.

Traditionally, two key functions of a University are to carry out research and teaching. However these traditonal functions of Universities have had to change dramatically over recent years to accommodate significant policy changes. These changes have moved the former harmonious balance of research and teaching to a position of conflict caused by the physical, financial, and contractual separation of these two key functions, with research perceived and rewarded as the dominant function. This, it is contended, is contrary to the expectations of undergraduate students who see teaching and learning as the primary function of a University and do not consider the research profile of an institution as a dominant criteria for choice.

This paper illustrates that such a separation has taken place and argues that this separation of research and teaching has created an environment in Higher Education which has tension, uncertainty and lack of clear direction. This environment is interfering with the diserable balance between research and teaching to the detriment of research, teaching and student learning.

## HISTORY AND IMPACT OF POLICY

It seems that the tension between research and teaching is a relatively recent apparition. It is quite conceivable that the various developments in policy over the last two decades in relation to the direction of, and vision for, higher education bear a large responsibility for the development of this tension. There appears to be a distinct lack of clarity and certainty in relation to what are the fundamental aims and functions of higher education and in relation to the strategies for attaining those aims and undertaking the functions. The 'vision' is opaque.

In 1965 the binary policy was established in the UK with distinctive policy aims. A government White Paper in 1966 set down how the policy would be implemented. Polytechnics were established with distinctive aims from universities. They would concentrate on courses with a vocational emphasis. From 1965 to 1992, the number of higher education students in polytechnics grew about five times whilst the universities grew at about half that rate. The range and diversity of courses on offer and the attraction of students with non-traditional entry requirements added to their 'success'. New kinds of students had access to this alternative kind of higher education, such as mature students, women and ethnic minorities. Polytechnics were successful in expanding sandwich course provision. By the time of the demise of the polytechnics in 1992, the polytechnics had become the larger sector in higher education in terms of student numbers. Thus, in the relatively short time of their existence, polytechnics made considerable achievements. These achievements can be regarded as student-related with relatively little to be said in relation to achievements in the field of research.

Pratt [4] explores the central, major factors in policy and policy making for the period beginning with the establishment of a binary higher education policy in 1965 and concluding with the provisions of the 1992 Further and Higher Education Act (and corresponding legislation in Scotland and N Ireland) which unified higher education in the UK. Pratt steers a charted course through this period and provides a well-evidenced, objective account of this dramatic period for higher education. The sense of his article could be summed up by one of the paragraphs in the article, which states:

*'In the historical context, the unificati on of higher education in 1992 could be seen as, simply, the most spectacular exampl e of academic drift in British history; the polytechnics finally succumbed to the long -standing s tatus hierarchy and became univ ersities. But history is not as simple as that. Indeed, it was les s that the polytechnics became universities than the universities had b ecome polytechnics'* .

Pratt goes on to say that the Committee of Directors of Polytechnics (CPD) in 1991 felt that a unified higher education system '*would lead to* ***open competition on price, quality and access*** *which would ensure the opening up of universities '*, (author's bold text). Pratt implies even further that the unification of higher education had as the central aim cost effective expansion with the emphasis on cost effectiveness and less on educational effectiveness. He states:

*'…it is hard to identify in the 1991 Whi te Paper (or even in the later Dearing Report and subsequent 1997 Wh ite Paper (DFEE 1997)* ***any substantial vision*** *. The 1991 White Pa per dealt almost entirely with the constitutional and administrative issue s of unification. The government's belief, it said, was* ***'that the real key to achieving cost effective expansion lies in gre ater competition for funds and students'.*** *Insofar as it had an education al aim it was 'diversity', but what that meant was not spelled out, n or did the White Paper explain how its proposals would help to achieve it. What it has undoubtedly achieve d is* ***competition*** *.'* (author's bold text). Pratt's article concludes with the suggestion that the system of mass higher education in Britain emerged as much by accident of policy as design and that currently, its policy future is far from clear.

Therefore what we have at present is a system of mass education with competition amongst institutions for funding. Former polytechnics gained access to research funding and are now competing for the research funding. Institutions have a maximum student number imposed on them, which defines the number of students to whom that institution can allow entry and therefore the funding for teaching is defined. The other source of income is through research funding for which there is today much more competition than previously. As a result institutions have to adopt extremely pro-active strategies for obtaining research funding. These strategies are resource intensive in terms of person-hours and the necessary resources are generally made available through diversion from teaching and curriculum development. It is argued that these policies of competition for funding and the separate funding of research and teaching have combined to cause a separation and an atmosphere of tension between the two functions.

Watson and Bowden's [5] critical account of the Conservative government and the shift to mass education, concentrates on student-related issues and funding based on student numbers and thereby implying that government policy concentrates on teaching related issues. However they do include a relevant critical account of how policy changes impacted on research and how this impact affected the relationship between teaching and research. They refer to the introduction of the Research Assessment Exercise as the culmination of a 'defensive decision' by the then University Grants Commission during a period of hostility and resentment between Whitehall (initially the Department of Education and Science and later the Office for Science and Technology), and the university-based research committee, which separated the funding of universities into two streams: 'teaching' and 'research', and which required special accountability for the latter.

The tenor of this paper implies that there was a lack of clear reasons for the considerable policy-making of the Conservative government but it does give an insight into the underlying, historical causes of tensions being set up in higher education generally, and between teaching and research in particular.

Research undertaken by Court [6] to investigate academics' opinions on the prominence of research, teaching and administration in determining career progression concluded that there is consensus that the emphasis on research in determining careers has gone too far. Teaching, administration and other tasks are regarded as 'second-class' and Court concludes by saying: *'It is up to institutions to provide opportunities across the range of professional academic tasks which avoid a permanently two-tiered career structure developing in higher education'*.

Barnett [7] questioned whether there is a relationship between research and higher education and produced sound arguments to distinguish between teaching and research. In relation to the ideology of research, Barnett [7] (P 123) points out that '*… a significant element of research is not only funded by the government, or quasi-governmental agencies, but also organised on a customer-contract basis. The initiative for a project very often comes from the funding agency, which adopts a 'proactive' stance, … setting the agenda, administering a steering committee and ensuring that the project is running towards the desired end*'. He argues that, under this set of structural conditions:

- '*… research has taken on an instrumental character, extrinsically oriented to external goals…*',
- '*… this form of research endeavour can all too easily produce a state of alienation in those conducting the research*',
- '*… research is largely uncontrolled by democratic means…*',
- '*… research is increasingly conducted outside institutions of higher education*'.

Barnett's underlying argument is based on his premise that '*… knowledge in the context of discovery and knowledge in the context of transmission are entirely different enterprises.*' Is it the case that higher education institutions have lost sight of the purpose of their research and are carrying out research for reasons other than higher education? Barnett (p 135) argues that 'institutions of higher education do not need to conduct research in order to justify the title 'institution of *higher* education'. He concludes that '*… if we are seriously interested in promoting the quality of higher education, of improving the effectiveness by which teachers teach and students learn, it is to the teaching process that we must look. In short if we are concerned about higher education, it is to higher education that we must turn, rather than research*'.

The Research Assessment Exercises (RAE's), formerly termed Research Selectivity Exercises, which have been used for research funding since 1986 have caused institutions to focus on the requirements of the RAE in the conduct of their research and to move resources into those areas which produce the optimal results for the RAE. This has evoked criticism. Elton [1] quotes, in his abstract, the phrase, *'competitive, adversarial and punitive spirit evoked by the RAE'* to describe unintended consequences of the RAE. The phrase was used to question whether such a spirit evoked by the RAE was in the longer run truly conducive to quality enhancement. The same phrase could be used to describe the growing relationship between research and teaching. Elton [1 p278] states in relation to the effect of the RAE on teaching: *'But above all, teaching suffered …*'. McNay's research [2,3] on the impact of the 1992 RAE on HEI's in England was inconclusive because many other contextual factors, *'including policies of other research funders, national policy on HE management, and pressure for more external research income*' impacted concurrently on institutional approaches and it was impossible to isolate the RAE as a unique agent of change. Nevertheless, McNay [3, para 154] concluded in relation to the effects of the RAE on teaching, that: *'there is undoubtedly a general concern that the RAE has had a detrimental effect on teaching activity….The concern revolves around the relative increase in attention to research, reflecting a relative neglect of teaching…'*

The factors, which were considered to have caused this concern, were:

- the casualisation of teaching work to release permanent staff to do research.
- the increased use of PhD students to teach undergraduates.
- the strong link between research funding and the quality of research which is not replicated between teaching funding and the quality of teaching, and as a result there were fewer incentives to improve quality in teaching than in research.

In relation to the effects on human resources, McNay [3] concluded that the process of designating staff as research active is '*undoubtedly intrusive. It adds a public dimension to matters such as the performance of individuals, their future roles and rewards, and to management processes for handling these.*' (para, 104). McNay also concluded (para. 105) that '*the RAE is clearly linked with an increase in stress among staff*'.

This research provides substantial evidence that policy decisions over recent years have caused a separation between teaching and research, largely due to funding decisions. This separation process has been tacit and unmanaged and has caused organizational and managerial difficulties in dealing with the two processes. These difficulties have impacted on staff and, ultimately, the education of undergraduate students as resources are removed from the teaching function to accommodate research.

## THE STUDY

Undergraduate students account for about 75% - 85% of students in higher education. The funding by government for undergraduate students accounts for about 70% of university funding. The views of undergraduate students are, therefore, important in the debate of research versus teaching. In order to determine the views of students' awareness of research and an estimation of the value placed by students on research generally in higher education, a questionnaire was distributed to selected students. The aim of the design of the questionnaire was to be as brief as possible to maximize the attention of the responding students and to elicit pertinent, rich data. The sample of students was discipline-based, using students from the Built Environment discipline. In order to make an institutional comparison and to determine any institutional differences, the sample was taken from two institutions; an 'old' university with a long established research tradition and a 'new' (twenty-year old) university, formerly a polytechnic which had an emphasis on vocational teaching.

### THE VIEWS OF THE UNDERGRADUATE STUDENT ON RESEARCH

Five questions were prepared to elicit these views. The number in the sample of students was 100, 50 from each university. The students in the sample were not selected completely at random but were selected in two groups in an attempt to offset any potential bias and also to determine any significant difference of opinion between first year and final year students.

The questions and responses were as follows:

**Question 1. On a scale of 1 to 8, please describe how aware you are of research that is undertaken in the School? 1 - not aware at all. 8 - very aware.**

**Table 1 Student Response to Question 1**

| **Response. 1-8** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|---|---|---|---|---|---|---|---|---|
| **'new' university** | 9 | 6 | 13 | 3 | 9 | 9 | 1 | 0 |
| **'old' university** | 8 | 12 | 9 | 4 | 5 | 6 | 1 | 2 |
| **Total no of students** | 17 | 18 | 22 | 7 | 14 | 15 | 2 | 2 |

These results shown in Table 1 indicate a significant lack of awareness amongst undergraduate students of research which is undertaken in the School. 58% of the responses lay in the 'lower awareness' sector of 1,2 and 3 on the scale; 19% lay in the 'higher awareness' sector of 6,7 and 8 with 23% in the central sector of 4 and 5. Only 4 students (4%) fell into the 7 and 8 category of 'very aware' and this was a final year student. It is also noticeable that there are no significant institutional differences.

**Question 2 'When choosing your course, how much did the research grading of the School influence your choice of course? 1 - not aware at all. 5 - very aware.**

**Table 2 Student Response to Question 2**

| **Response** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| **'new' university** | 23 | 8 | 10 | 6 | 3 |
| **'old' university** | 19 | 9 | 6 | 8 | 1 |
| **Total no of students** | 42 | 17 | 16 | 14 | 4 |

The results in Table 2 indicate that the research grading of the School did influence some students in their choice of course. However a substantial proportion, 45% indicated that the research grading did not influence their choice of course at all. Scores of 1 + 2 together accounted for 63% of the responses. Scores of 4 + 5 together accounted for 19% of the responses. The remaining responses fell in the central category of 3. This indicates that the research grading of the School is not significantly important to students when they are choosing their course. There were no significant institutional differences.

**Question 3 'When choosing your course, how much did the research grading of the INSTITUTION influence your choice of course'. 1- not at all. 5 - very much**

This question mirrored question 2 but was intended to either reinforce or contradict any interpretation of responses to Q2 as well as giving responses to the influence of the research grading of the institution.

**Table 3 Student Response to Question 3**

| **Response** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| **'new' university** | 18 | 13 | 8 | 6 | 5 |
| **'old' university** | 18 | 9 | 12 | 3 | 3 |
| **Total no of students** | 36 | 22 | 20 | 9 | 8 |

The responses to this question, summarised in Table 3, gave very similar results to those of Question 2. There were no significant institutional differences. Only 9% stated that the research grading of the institution influenced their choice of course 'very much', category 5. It seems, therefore, that research does not significantly influence prospective students when they choose their higher education course.

**Question 4. Please place the following in a rank order which best reflects your prime reason for doing the course. (place a 1 against the most important factor, 2 against the next most important factor and so on. Place N/A against any that do not apply. Feel free to add additional factors).**

**Table 4 Student Response to Question 4**

| **Rank - new university** | | **Rank - old university** | |
|---|---|---|---|
| C | to get a degree to enhance employment opportunities | C | to get a degree to enhance employment opportunities |
| A | to accumulate knowledge about the subject | B | to get a degree |
| B | to get a degree | A | to accumulate knowledge about the subject |
| I | to learn key skills | E | to be trained in research methodology |
| F | for the social life | D | to put off working for some time |
| E | to be trained in research methodology | F | for the social life |
| G | **to do research** | I | to learn key skills |
| H | for the sports facilities | H | for the sports facilities |
| D | to put off working for some time | G | **to do research** |

The analysis of Question 4, shown in Table 4, showed no significant differences between the two universities. There is a clear, marked distinction in these results. The first three ranked reasons for doing the course fall within the 'education' or 'teaching' side of the argument while 'research' reasons are ranked lower. It is also noticeable that students at both institutions ranked 'for the social life' category higher than the 'to do research' category as a reason for doing the course! It seems clear form this that the prime reason why these students are doing their course is to get a degree to enhance employment opportunities. Other factors are of lesser importance. It is interesting to note that the category 'to be trained in research methodology' is ranked around the middle for both institutions. This may give cause for concern, considering that students' academic studies are research based and that the final year in particular is given over to the completion of a dissertation based on research training and doing research and which takes up one third of their final year.

**Question 5 'What is the function of a university?'**
This was an open question. The responses to this question could be easily analysed into the two fields relating to the argument of this paper. However, it is more apt to use the term 'education' instead of 'teaching' to describe that field. Using these terms, the results can be summarised as follows:

**Table 5 Student Response to Question 5**

| | | **New** | **Old** |
|---|---|---|---|
| Education | Which included: understanding; enhancing personal skills; knowledge development; training qualifications; increased employability and better pay; preparation for the workplace; and character development | 81% | 81% |
| Research | | 5% | 2% |
| No Response | | 14% | 17% |

This suggests an opinion amongst an overwhelming proportion of students that universities are for education of students for employment.

## CONCLUSION

Gray [8, p7] stated: *'To have two equally important core activities makes organisational nonsense….'* We think this is the hub of the solution to the tension. It is time that it was recognised that these two functions of teaching and research are different and require different resourcing. One is not dependent upon the other. The university teacher must undertake a certain amount of research to keep up with developments in his/her subject. This is clear. However, such research is of secondary character and, in many cases, may be better derived from practice by consultancy. It is not research for pushing boundaries. On the other hand, innovation and technology transfer on a level which will have economic impact on a nation's wealth and wellbeing can only be achieved by dedicated research using resources which are specifically for that task.

Undergraduate students have clear requirements and expectations from their university education. Overall, the results of the questionnaire suggest, very strongly, that research plays an unimportant role in the opinion of undergraduate students in the Built Environment. However, the results need to be tempered with the assertion that universities are better placed than undergraduate students to assess the value and utility of research in education.

## REFERENCES


[1] Elton, Lewis (2000), The UK Research Assessment Exercise: Unintended Consequences, *Higher Education Quarterly* Vol. 54, No 3, pp 274-283.

[2] McNay, I (1997a) The Impact of the 1992 RAE on Institutional and Individual Behaviour in English Higher Education: the evidence from a research project, HEFCE ref M 5/97.

[3] McNay, I (1997b) The Impact of the 1992 RAE on Institutional and Individual Behaviour in English Higher Education: HEFCE ref M6/97.

[4] Pratt, John (1999), *Journal of Education Policy* , Policy and policymaking in the unification of higher education, Vol 14, No 3, pp257-269.

[5] Watson, David and Bowden, Rachel, (1999) *Journal of Education Policy* , Why did they do it?: The Conservatives and mass higher education, 1979-97, Vol 14, No 3, pp 243-256.

[6] Court, Stephen (1999), Negotiating the Research Imperative: The Views of UK Academics on their Career Opportunities, *Higher Education Quarterly* Vol. 53, No 1, pp 65-87.

[7] Barnett, Ronald (1990), *The Idea of Higher Education* , The Society for Research into Higher Education & Open University Press, Buckingham.