

Leading, promoting and supporting undergraduate research in the new university sector

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Project

Several colleagues at the University of Gloucestershire made a successful bid in summer 2007 on the subject of 'Undergraduate research in the new university sector' to the inaugural call for the Higher Education Academy's National Teaching Fellowship (NTF) Project scheme.

Alongside a project research assistant, Wendelin Romer, I act as one of the co-directors, in tandem with Mick Healey, supported by a team of colleagues: Kris Mason O'Connor, Carolyn Roberts, Kenny Lynch, Chris Short, Lindsey McEwen, and our project evaluator Phil Gravestock. We work collaboratively as a team, meeting monthly and following a tight timetable which has several discrete but interlinked work packages parceled up among subsets of the team. Our project aims to identify transferable practices and inform policy to enhance the student experience at institutional and national levels. As well as analysing and disseminating practice that falls under the general definition evolved from our inclusive understanding of research in all undergraduate years, the project additionally addresses two of the sector's priority areas: the student learning experience and academic leadership.

Background

Our working definition of undergraduate research includes Boyer's (1990) scholarships of discovery, integration and application (engagement), and is characterised by breadth: 'undergraduate research' describes student engagement from induction to graduation, individually and in groups, in research and inquiry into disciplinary, professional and community-based problems and issues, including involvement in knowledge exchange activities.

The concept and practice of undergraduate research is well established in the United States (e.g. see Seymour et al (2004), NSF (2006), Kinkead (2003), Kaufman and Stock (2004) and the work of the Council on Undergraduate Research: www.cur.org/). It is also prominent internationally in the Honours dissertation, and at many research-intensive universities across the world (e.g. the National Reinvention Center at Miami University focuses on undergraduate education at research universities: www.sunysb.edu/Reinventioncenter/),

but the project team agreed that there is scope for more analysis of work being undertaken in the UK post-92 higher education sector (building on, for example, Jenkins (2004) and Jenkins and Healey (2007)).

We felt that our project would also build on and expand work from our own institution that was contributing to discussion and understanding within Gloucestershire University, including: inter-Faculty co-operative projects to develop and evaluate students' experiences of undergraduate research; increased student participation in research projects; inclusion of undergraduate research in the curriculum of our nationally-accredited Postgraduate Certificate in Higher Education, which all new academic staff undertake; participation in the Carnegie Scholarship of Teaching and Learning programme on Undergraduate Research (CASTL); and institutional webpages containing guidance on undergraduate research for staff and students.

Methodology

The project includes several strands of activity: an analysis of new universities' research-informed teaching (RiT) statements, policies and practices; an inter-university benchmarking exercise on research-teaching links; a review and analysis of approaches to the leadership of undergraduate research in North America; and the identification and development of ten case studies to illustrate the range of ways in which English 'new' universities are fostering undergraduate research.

First, given the opportunity offered and impact felt in the post-1992 sector of the research-informed teaching monies the Higher Education Funding Council for England (HEFCE) has set aside for three years for non-research-intensive institutions, we wished to undertake an inquiry into how new universities were framing and phrasing their research-informed teaching statements and policies, as well as looking for evidence of undergraduate research activity in practice. This ongoing analysis has produced a fascinating snapshot of new and renewed effort that has surfaced in diverse institutional-level documentation focused on Teaching Quality Enhancement Fund (TQEF) plans under the RiT Initiative, but also including research strategies, for example.

Also, following the example of an innovative benchmarking exercise in Australia, the project is conducting an inter-university comparison of research-teaching links. We are therefore in the process of completing phase 1 of the exercise between the University of Gloucestershire and another new university in England, using the template developed by Monash and Sydney Universities in Australia (Brew and Weir, 2004). In preparation for this, the University had established a working group in 2006 to identify appropriate examples of linking teaching, research and knowledge transfer. The group reviewed areas within the University for institutional, departmental, and discipline-based strategies and practices to benefit student learning. The subsequent report included a recommendation that an audit be conducted at institutional and Faculty level to determine suitable strategies, disseminate good practice and propose areas for development with regard to strengthening and enhancing linkages, including the promotion of undergraduate research.

Thirdly, in collaboration with the University's Centre for Excellence in Teaching and Learning, the Centre for Active Learning (CeAL), we are undertaking a review and analysis of approaches to the leadership of undergraduate research outside the research-intensive universities in North America. This is enhanced by our involvement with the Carnegie (CASTL) Leadership programme, where we are part of a consortium discussing approaches to the leadership of undergraduate research. These US case studies are being written up as examples of Stateside practice for sharing via the University website and they will also contribute to another of the project's outputs, which will include a three-part guide to the promotion and leadership of undergraduate research at institutional, departmental and course level.

Assisted by CeAL and the University's Pedagogic Research and Scholarship Institute (PRSI), we held a swapshop at Gloucestershire in May 2008 which was attended by participants from nearly 30 new universities. This was an excellent event from the point of view of sharing and networking but it also helped the project in identifying and developing another strand: the gathering of information on innovative practices to illustrate the range of approaches through which English 'new'

universities are fostering undergraduate research. Our aim here is the identification and development of ten case studies to chart the spectrum of ways in which UK HEIs are leading and promoting undergraduate research, and how they are implemented in departments and disciplines.

Finally, we are also in the process of trialling and evaluating three undergraduate research initiatives discovered during the project at Gloucestershire. These will clearly provide some further first-hand experience of the transferability of innovative practice in undergraduate research. The results of this and the other strands of the project outlined above will be detailed in our final report but we hope real benefits to the sector will also lie in the encouragement of and impetus to the undergraduate student research experience.

Conclusions

The project will run until the end of the 2009-10 academic year but has already highlighted for us innovative and exciting practices across the sector. It is clear that considerable activity was in place on undergraduate research before the research-informed teaching monies were allocated, but it is also apparent that considerable new efforts and initiatives have arisen from this innovative, targeted funding source. The project team hopes that it is both bearing witness and contributing to a sector-wide development in perceptions and practices in this area, not all utilising the term 'undergraduate research', but all focusing in a variety of ways on enquiry-based activity that supports active learning approaches, with students participating as scholars.

References

- Boyer, A. (1990) *Scholarship Reconsidered: Priorities of the Professoriate*. New Jersey: Princeton University Press, The Carnegie Foundation for the Advancement of Teaching.
- Brew, A. and Weir, J. (2004) *Teaching-Research Nexus Benchmarking Project*. Institute for Learning and Teaching, University of Sydney, and Centre for Higher Education Quality, Monash University.
- Jenkins, A. (2004) Supporting undergraduate research (in the UK): An outline proposal. Paper presented to Research and Teaching: Closing the divide? An international colloquium, Marwell, Winchester, 13-14 February. Available at:

www.solent.ac.uk/ExternalUP/318/alan_jenkin_s_paper__2_.doc

Jenkins, A. and Healey, M. (2007) Critiquing excellence: undergraduate research for all students. In: Skelton, A. (ed) *International perspectives on teaching excellence in higher education*. London: Routledge.

Kaufman, L. R. and Stock, E. (eds) (2004) *Reinvigorating the Undergraduate Experience: successful models supported by NSF's AIRE/RAIRE Program*. Washington: Centre for Undergraduate Research. Available at:
http://www.cur.org/publications/AIRE_RAIRE/toc.asp

Kinkead, J. (ed) (2003) *Valuing and Supporting Undergraduate Research*. New Directions for Teaching and Learning 93. San Francisco: Jossey-Bass.

NSF (2006) *Undergraduate Research Collaboratives (URC), NSF 06-521*. Available at:
www.nsf.gov/pubs/2006/nsf06521/nsf06521.htm

Seymour, E., Hunter, A., Laursen, S. L. and Deantoni, T. (2004) Establishing the benefits of research experiences for undergraduates in the sciences: first findings from a three year study. *Science Education* 88(4), 493-534.

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