

*Short Communication*

## **Educational Research: Biologists Finding their Voice**

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Since the publication of the Dearing report (1997) there has been an increasing emphasis on the quality of teaching and learning provision within higher education institutions (HEIs). This focus on provision has in turn generated much educational research into 'approaches' to both teaching practice and student learning within higher education (HE). Prosser *et al*, (1994) for example, have classified tutors as taking a variety of approaches to their practice, ranging from the teacher/information transmission, to a conceptual change/student-focused approach. Perhaps the most well known, and equally most misunderstood metaphor for student learning in HE, is the 'deep' and 'surface' approach reported by Marton and Saljo (1976). Among many academics this not seen as an approach, but rather a statement about how individual students learn. Hence you may hear tutors make comments such as, 'if only we had more deep learners'. What Marton and Saljo argued was that in different learning environments an individual student is more likely to adopt a particular approach to learning. Trigwell *et al*, (1999) illustrated that a specific teaching approach can influence how students approach learning, an information transmission approach is for example, more likely to encourage a surface approach to learning.

Of course, educational researchers such as Trigwell and Prosser, are writing predominantly for other educational researchers, and in doing so a substantial body of literature relating to learning and teaching in HE has been built. Unfortunately, many biologists remain oblivious to this literature and as such it remains unread by them. As a consequence of this, helpful research findings such as those related to curriculum design, are not readily implemented by either tutors or managers in HE. There are a number of reasons for this lack of involvement with the educational literature. The language used may be alien, research concepts written about may be unfamiliar, and the research methodology is often, though not exclusively, qualitative, which for a number of scientists is unexplored terrain. There are, however, other broader reasons. HEIs seem, by and large, relatively happy to encourage teaching academics to take a particular approach to teaching without ensuring an institutional understanding of what that approach may entail. For example, the notion of student-centredness, is both topical and meaningful in curriculum design, but one question is whether individual HEIs have a common workable definition for this term. It does matter if they do not. Individual departments and faculties

design curricula, and in so doing, create learning environments. If student-centredness is at the core of an intended curriculum, then a lack of common understanding of this term may mean that students fail to receive a student-centred learning experience and instead, receive a range of experiences that are well off the student-centredness radar albeit delivered by capable and well meaning academics who are *doing* something that *they* think is student-centred. An educational researcher may well ask “and what are the students *doing*?”. In bioscience, with the timely introduction of the ‘Getting Started with Educational Research’ programme, that question could now be asked by a practising biologist.

This shift in who is asking the questions is a good thing - not only for the excellent reasons outlined above. Biologists have, for so long, just had to get on with implementing such requests as “please design an outcome-led curriculum” or “can you introduce more formative learning activities into your teaching?”. Now tutors can actually explore what these requests mean. They are being encouraged by this educational research programme to:

- Explore the literature on particular issues of teaching and learning practice, such as formative assessment;
- Use research to design learning environment and challenge anecdotal beliefs;
- Evaluate and discuss the implementation of their experimental design; and
- Communicate those findings

Surely this make sense - educational research informing teaching, subsequent developments and progression, and, best of all, practitioners? You would have thought this was already being done, that is, unless you work in HE.

The other attribute of the ‘Getting Started with Educational Research’ programme is that the Centre for Bioscience is developing, in many HEIs across the country, biologists who are becoming increasingly familiar with the language and practices of educational research. As such, and *providing they are given the opportunity*, these tutors can offer a ‘research informed’ contribution to key institutional discussions on learning and teaching. They can bridge the divides that exist between established educational research/literature with HEIs learning and teaching policy, and the actual teaching environment where those policies are implemented.

Increasingly tutors are already making a difference in the literature. Well regarded educational journals such as *Assessment and Evaluation in Higher Education* and *Studies in Higher Education*, now publish research papers by practitioners. It is not easy to get papers accepted, but that only confirms the strength of those peer reviewed papers that are accepted. If you are not at the stage of publishing in educational journals, then across the country, there are increasing calls for papers to be presented at educational meetings where tutors are welcome. The Oxford Brookes’ ‘Improving Student Learning’ meetings for example, have over the years provided an excellent forum where

established and 'new' researchers are brought together. At such meetings research papers containing well formed research questions, rigorous methodology and informed discussion, are presented. There is also an excellent book of conference proceedings published. It should also be noted that the Centre for Bioscience has its second annual teaching and learning conference this June providing biologists (and other scientists) with a platform for informed debate.

The Centre for Bioscience has made a start in developing a discipline specific educational research culture within universities and, rightly, this has to be applauded. But there is plenty still to do. We need to encourage institutions to develop career paths for such researchers; Learning and Teaching Fellowships are good, but they are not the best way of illustrating such research prowess. Excellence in discipline specific educational research should be represented, at the very least, by cross institutional Readerships and a Chair. We should not have to wait till HECFE funds HEIs to make provision for such posts; these positions should be embedded into the very fabric that defines a university.

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