# THE PUZZLE OF TEACHING IN HIGHER EDUCATION: REPOSITIONING LEARNING IN ACADEMIC PRACTICE

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There is a pervasive, often disquieting, puzzle which has intrigued faculty developers and those concerned with the enhancement of teaching quality in higher education for many years. How is it that excellent teachers, without any ostensible pedagogical training, are excellent teachers? At its core, this puzzle raises issues about the nature of great teachers, particularly the idea that excellent teachers are born. A teacher has it—the ability to teach well—or she does not have it. Teaching is regarded as a kind of art, and good teachers are artists. Elements of teaching and learning may be taught, but essentially there is something 'unknowable' at the core of excellence in teaching. This view might be raised with respect to all teaching, but it is heard most acutely in higher education where pedagogical preparation has historically been rather rare.

Recently, however, there has been an escalating concern about the quality of teaching in our universities, and how this might be improved especially as the basic training for teaching in higher education, typically doctoral or professional education, has failed to provide substantive training in the actual practice of teaching. There are diverse efforts to remedy this lack of training with an array of different teaching development programmes for both graduate students and faculty, but there is little consensus on what constitutes the best remedy. While these faculty development efforts assume that teaching can be improved, the enigma of naturally excellent teachers remains a noteworthy puzzle. It haunts, in some way or other, most if not all of these current initiatives and the theoretical frameworks informing them. One of the most influential and widespread teaching focused enterprises in higher education today, for example, is the Scholarship of Teaching and Learning (SOTL) prompted by Boyer (1990). This framework and its initiatives has inspired and led to many effective and transformative teaching practices grounded in the theory and research on learning and teaching that are rigorously researched, documented and disseminated. It raises however, an important set of distinctions among the ideas of excellent teaching, scholarly teaching and the scholarship of teaching (Cambridge, 1999).

None of these categories are easily defined and certainly none is without debate; however, each is related to student learning. Excellent teaching here is defined in terms of the depth

and quality of student learning it facilitates and while often informed by personal reflection and inquiry, it does not formally draw upon the literature and research on teaching and learning. Scholarly teaching is characterised by a more formal reflection and inquiry informed by feedback from students and fellow faculty, and drawing on the literature and research on learning and teaching as well as faculty development programmes/activities. The scholarship of teaching is scholarly, but is also research in its own right. It is public, open to peer critique, rigorously conducted, aimed at publication and dissemination, and the creation of a solid body of work to inform teaching practices and generate additional problems and questions. Increasingly, faculty and educational developers have engaged in helping faculty develop both scholarly teaching and the scholarship of teaching. The dilemma has been, of course, that many of these faculty members (armed with a deeper knowledge, understanding and sophisticated research experiences of learning and teaching) are nevertheless often unable to reach the kind of excellence in teaching which other faculty appear to attain effortlessly without any apparent professional knowledge, training and/or scholarship in teaching. Reaching the level of the 'naturally excellent' teacher is, of course, not always the goal, and a faculty member's failure to reach this level does not suggest that training cannot help faculty attain excellence.

Still, there is the question of how is it that some faculty seem to so effortlessly achieve excellence. The answer lies in their relationship with *learning*. While these teachers may or may not have formally mastered the prevailing tips, techniques, best practices and scholarship of teaching in higher education, they have mastered learning. They know what it is to learn in their disciplines. They are master learners in their fields. Indeed, for the most part that is precisely why they are teachers in higher education. They are not, of course, alone in this achievement. Most faculty are and should be master learners in their disciplines. As we will see, however, it is how excellent teachers draw on this mastery which is important.

What is a master learner? I will not go into detail here about the nature of human learning, but for the purposes of this talk, I do want to mention a distinctive aspect of learning in higher education first highlighted by Marton, Hounsell and Entwistle (1997) among others. Their research on student learning in higher education contrasted three important approaches to learning: surface, strategic and deep. In the surface approach, the intention of study in higher education is to cope with course primarily by reproducing the course material, often by rote memorisation. In the strategic approach, however, students' intention is to get the highest possible grades chiefly through organisation and management of themselves and the course material to meet the assessment criteria. Finally, students' intention in a deep approach to learning is to understand the material, to make connections with previous knowledge and experience, to transform and reconstruct the material. The master learner's learning approach is most closely associated with the deep approach.

With the vast majority of faculty engaged in teaching particular topics which they have mastered and in which they are experts, it is presumed that these faculty have engaged in many years of graduate and post graduate study, acquiring and refining their abilities and skills for master learning in that area. And as academics, they continue to take deep approaches towards their ongoing research, scholarship and learning within the field. Indeed, we found this to be the case in a recent study undertaken with colleagues at Northwestern. We interviewed 25 faculty members from science, engineering, medicine, social science, humanities and arts disciplines and professional fields about their own learning and about

their students' learning. Unsurprisingly, they all readily described their own work in their research, scholarship and professional practice, as important learning experiences. Moreover, despite differences in styles and understandings of what research entails, they were consistent in their descriptions of their own learning as deep in nature. One, for instance, told us, "As far as the learning process of research, I just keep asking questions that people don't seem to know the answers, and that guides me towards areas that will be interesting to explore and…valuable to understand better". Common to all faculty accounts is an understanding of learning as a constructive process of asking questions, addressing problems, making connections with personal experience, and drawing on existing knowledge. "[W]e are constant learners. …We ask ourselves a lot of questions—'what if we know this' or 'what if we know that?'—then we design an experiment around it and test our hypothesis".

This research, however, was interesting in three other ways. To begin, almost two thirds (16 of 25) of these university teachers understood their undergraduate students' learning as qualitatively different from their own learning. In contrast to their own more problem-focused, inquiry based and deeper learning experience, most faculty regarded student learning as essentially a process of acquiring course content (facts, information, ideas, concepts and practical abilities). As one said, "the very basics [of student leaning] has to deal with gaining knowledge". The focal point of student learning at the undergraduate level was conceived as being the intellectual and practical acquisition of the content their students were studying. When faculty did on occasion notice deeper student approaches to learning during their teaching and recognised parallels to their own approaches to learning, such student approaches were still considered, in the faculty's mind, as incidental or peripheral to their view that students' main focus in learning was knowledge acquisition.

Secondly, the understanding of student learning as acquisition of knowledge is, perhaps predictably, associated with an understanding of teaching as the practice of conveying knowledge to students. Teaching undergraduates is essentially about content transmission, and the prioritisation of knowledge over thinking (Light & Cox, 2001; Prosser & Trigwell, 1999). As one of the faculty members we interviewed said, "ways of knowing…should not be taught at the expense of just hard facts and data. I told the student that I respected no-nonsense courses where students do some busy work by working through examples more than talk of theories."

Thirdly, the study suggests that the understanding of student learning as acquisition of knowledge, and as distinct from the teacher's own more sophisticated deeper experience of learning, appears to underpin a substantive fracture in the way these university teachers thought about and experienced their overall academic practice. Teaching practice was essentially regarded as unrelated to their research or scholarship—"I feel the two are really quite separate tasks," one told us. Another commented that "research…doesn't work so well in class rooms…I can always pretend that we are exploring the field, of course, like with home works and things". The best that might be done is a kind of pretence at research. For all intents and purposes, teaching was reported as neither informing nor being informed by research. Even in those cases in which a connection was recognised—"teaching or talking about things might actually instigate some thoughts (for research)"—the connection was generally deemed to be incidental or unexpected, certainly not planned for or even anticipated. For these teachers, research and teaching were essentially detached academic activities with little in common.

Given the rather entrenched culture of rivalry (Light & Cox, 2001) and incompatibility (Barnett & Hallam, 1999) between research and teaching which epitomises much of higher education, it is not perhaps all that unexpected that faculty would experience their overall academic practice (encompassing teaching and research) as disconnected. Indeed, perhaps more remarkable are those academics who managed to achieve and maintain connected and integrated experiences of their overall university work including teaching, conducting research, and their own continuous learning. In our study, four faculty members reported a vigorous alignment between their understanding of their own learning and that of their students—a consistency which they took into their teaching. One commented, "I set up learning [activities] so that…each person is given an opportunity through some of the challenges that I pose in the class room in their learning experiments to explore a concept in their own way and come to construct an understanding". Their teaching, moreover, is purposefully informed by their research, not simply in terms of content but also by the practices, ways of thinking and values central to research, as another faculty member told us, "the findings that I uncover [in my research] work their way into lessons. …There's that immediacy and connection [for the students]. It is important because of my philosophy that research and teaching are so closely linked, so I share those values with my students. It is important to think as an investigator when you are out in the classrooms".

Studies such as this suggest that the essence of good teaching does not lay simply, or even mainly, in the mastery of tips, techniques and best practices, but is rather situated in a fundamental change in the way faculty think about undergraduate learning. Indeed, to a very large degree, scholarly teaching and the scholarship of teaching are concerned with this development precisely. The recognition and realisation of such a connected experience of learning, teaching and research is, however, not easily achieved. It does not, for example, entail assisting faculty in understanding the nature of undergraduate learning, but rather helping them integrate their experience of their own academic practices and, indeed, their own academic identities as master learners and what that means for themselves and their students. It is this idea of the integration of academic understandings of learning that provides the beginning of an answer to our puzzle—how is it that excellent teachers, without any ostensible pedagogical training, with no training in educational techniques, with no formal study of human learning, are excellent teachers?

The answer goes beyond the rather simple notion that good teachers are born. The answer is that these naturally excellent teachers are academically integrated and as such, have a pedagogical sophistication which even they are often unaware. They have spent years developing a deep understanding of what it means to learn in their fields. They have drawn upon their own approaches to learning, reflected on these and intuitively understood that this is what they want for their students: a deeper learning experience. They have developed ways of helping students and of facilitating students' achievement of this experience. In a large study examining what makes excellent teacher excellent teachers, my colleague, Bain (2004), found that excellent teachers were different from faculty who were not so highly judged as teachers. The former exhibited a number of characteristics not shared by the latter. Two critical characteristics which excellent teachers shared were an innate, deep-level understanding of student learning which corresponded with their own learning, and a desire to facilitate that kind of learning in their students. Excellent university teachers are excellent because where others see teaching and research, they see learning.

In the end, research and teaching are simply names of practices in higher education. They are indispensable to the academic enterprise, requiring substantive training and expertise. They are not, however, nearly as important as the goals which they aim to achieve. And the goals of both research and teaching practices are essentially the same: the advancement of learning and knowledge. And, if one leads to cutting edge advances in scientific theory, medical treatments, historical understanding, artistic achievement at an international level, and the other leads to cutting edge advances in individual mastery of critical concepts in science, economics, philosophy or film studies at the undergraduate level, then the structure of the learning is the same. Faculty recognition that research and teaching are the same—despite sizeable differences in the level at which learning is taking place—takes us a long way towards the resolution of our puzzle. Good teachers are not born so much as formed, and they are often self-formed in environments which permit, support and encourage faculty to reposition active, deeper learning at the centre of a rich and fully integrated set of academic practices. Initiating and sustaining such academic learning environments requires institutional, departmental and individual commitment, but it also offers a uniquely academic path towards enhancing the quality of student learning in higher education.

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