

Open Dialogue peer review: A response to Hartley

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University teaching in psychology and elsewhere: Why don't we practise what we know?

Beginnings

JAMES HARTLEY begins his paper on a personal note with recollections of his first university teaching experience at Keele University. In fact our careers as psychology teachers began at the same time at Sheffield University, where we met at the start of term in 1958 in our first psychology class. We graduated together in 1961, and both worked as researchers in the Sheffield psychology department until our paths diverged, with Jim heading to Keele and I to Canada. We have remained friends and colleagues ever since then, and have had many conversations over the years about post-secondary teaching and learning.

Although I continued to teach undergraduate psychology for the whole 45 years of my academic life, in 1977 my professional interests changed focus when I became director of a teaching and learning centre at a major Canadian university¹, and became engaged with the issue of how academics can teach better and students learn more effectively. This has been my primary work ever since, as an educational developer, consultant, researcher, and writer.

How teachers teach, how students learn

It seems self-evident that how teachers teach and how students learn should be seen inextricably intertwined. After all, the only purpose of teaching is that someone should learn something. Yet in my experience, a large number of university teachers approach their work as if they had never

themselves been students. How else to explain the fact that prevailing university teaching methods have hardly changed over a century or more, even though there is considerable evidence that, for example, the ubiquitous lecture has major limitations for promoting learning (see Bligh, 2000), and is not even especially liked by students?

But if many teachers do not understand much about the psychology of teaching and learning, it is probably also true that many students entering higher education have only the vaguest understanding of what constitutes effective learning – in part because the topic of learning itself has probably never featured in their education to this point. It is rather as if an apprentice cabinet maker was taught all about the history and structure of furniture, but never shown how to master the basic tools and skills of woodwork.

Jim Hartley and I went to the same type of English grammar school in the 1950s, and I suspect the two of us formed rather similar conceptions of 'successful learning', which largely involved listening, noting, remembering, and writing. Of these the most challenging and valuable was probably the latter, which did allow for some integration and expression of original ideas. My school classes were lively and reasonably interactive, but there was little question that we were there to do anything more than master received wisdom passed down by the teacher. In other words we were at the stage that William Perry (1970), in his classic study of

¹ Against Jim Hartley's advice: he wrote to me at the time that this was a risky career move, but by this time I had taken the job, and he subsequently expressed delight at my temerity.

intellectual development in Harvard undergraduates, refers to as the 'dualism', in which the student's task is to learn the right answers and ignore the others. Later researchers have described this conception of learning as 'surface' or 'reproducing' (e.g. Entwistle & Ramsden, 1983; Marton & Säljö, 1976a, 1976b).

Psychology and learning

Learning has, of course, always been a central concern of psychology, and when Jim and I were undergraduates, the pre-eminent figure in learning theory was B.F. Skinner. North American psychology textbooks of the day (not normally 'assigned' in British universities, but widely consulted nonetheless) all had a fat chapter on the psychology of learning. However, I suspect that the material there would give students very little insight into the sort of learning they did to try and make sense of their courses or prepare for exams. Nor would it give teachers any clues about how to promote more effective studying on the part of their students. The emphasis in the texts was largely on rats, pigeons, chimpanzees, or occasionally young children and, although educational psychology (not part of Jim's and my curriculum) had a slightly broader focus, even here there was little that seemed immediately relevant to teaching undergraduates.

Skinner's notion of 'shaping behaviour' was perhaps unduly mechanistic, but it did at least appear to have practical implications for teaching both children and adults. Indeed, in the 1960s there was a flurry of interest in so-called teaching machines and programmed instruction. The Sheffield psychology department developed its own teaching machine, and I worked on this project for a while. Meanwhile Jim completed a PhD on the effectiveness of programmed instruction, and later wrote and edited several books on the subject (for example, Hartley, 1972; Hartley & Davies, 1972). Skinner visited the Sheffield department during this period, and I recall a

convivial dinner at which he expounded at length upon the implications his work for improving human learning and making the world a generally better place.

Needless to say, all this research did little to change the way psychology departments did their teaching. In 1984 I prepared a working paper on the teaching of psychology in Canada for a major 'state of the discipline' review being carried out by the Canadian Psychological Association (later published – see Knapper, 1986). I surveyed all Canadian psychology departments (there was an enviable 77 per cent response rate) to ask about teaching and assessment methods, staff training, evaluation of teaching, research on pedagogical issues, and instructional innovations. I concluded that 'approaches to teaching, assessment, and evaluation in Canadian psychology departments appear to be largely conservative and traditional' (p.61). Teaching was largely by lectures, assessment relied extensively on multiple-choice tests, there was minimal faculty involvement in educational development, and very little teaching innovation or pedagogical research. Even more telling was the finding that prevailing teaching approaches failed to reflect important evidence about learning uncovered by psychologists themselves. Jim's paper suggests that the situation today in Britain is largely unchanged, and I would guess the same applies in Canada – and probably North America more generally.

Research on undergraduate learning and its implications

I have already referred to some of the key research on learning in undergraduates that could and should inform teaching practice. It mostly began in the 1980s, continues to the present, and is associated with the names of Marton and Säljö (Sweden), Entwistle and Ramsden (UK), Kember and Gow (Hong Kong), and Perry (US). Briefly summarised, the body of this research suggests that: (a) university students approach learning in different ways that can be characterised as ranging from surface (reproducing facts) to

deep (searching for meaning); and (b) most students are able change their approach in response to the learning context, in particular the methods used by the teacher (Gow & Kember, 1993; Kember & Gow, 1994) and the nature of assessment (Watkins & Hattie, 1981).

To expand on the second point, Ramsden and Entwistle (1981) in a study that involved 2000 British university students enrolled in 66 different academic departments in the humanities, social sciences, sciences, and engineering, identified a set of factors that seemed to encourage a shift from surface to deeper learning. These include:

- faculty who like students, like teaching, take teaching seriously, and are good at it (e.g. pitch material at the right level, give help and advice on study methods);
- manageable workloads for students;
- relative 'freedom in learning' (allowing students a choice of tasks to complete course requirements, and a choice of learning methods to accomplish these tasks);
- setting clear goals and standards for academic work;
- vocational relevance (perceived links between what was being studied and students' later lives and careers);
- positive social climate (good relations between students and teachers);
- less emphasis on formal teaching (attending classes) compared to individual study and group projects.

These findings are in many ways complemented by data from the US. For example, Astin (1993) in a massive on-going project that has involved more than 20,000 students, 25,000 academic staff, and 200 different institutions, showed that the characteristics and behaviour of teaching staff had major implications for student development. In particular, opportunities for student-faculty interaction had 'positive correlations with every self-reported area of intellectual and personal growth' (p.383), and there were similar positive effects associated with oppor-

tunities for interactions among students themselves. In contrast, sheer number of hours devoted to teaching was unrelated to cognitive development, suggesting it is the quality of teacher-student contact, not the quantity, that is of critical importance.

Pascarella and Terenzini (1991, 2005) analysed the results of over 2600 empirical studies dealing with the impact of higher education on student learning and development. They concluded that student learning is 'unambiguously linked to effective teaching, and we know much about what effective teachers do and how they behave in the classroom' (1991, p.619). Such behaviours include the instructor's ability to establish rapport with students, faculty accessibility, feedback to students, active learning strategies, opportunities for students to interact with their peers, and 'a curricular experience in which students are required to integrate learning from separate courses around a central theme' (1991, p.619).

Elsewhere (Knapper, 2010) I have tried to identify the implications of this growing and impressive body of research in terms of what is wrong with our current practices and what we might do to remedy the situation. Here first are the problems:

- Teaching remains overwhelmingly didactic and reliant on traditional lectures and assessment methods are often trivial and inauthentic;
- Curriculum development relies far too much on disciplinary tradition and faculty interests, rather than on student and societal needs;
- There is a tendency to compartmentalise knowledge that mitigates against integration of ideas, skills, and insights from different fields;
- Evaluation of teaching effectiveness and learning outcomes is often superficial.

Among my suggestions for change are the following:

- Teaching methods that stress student activity and task performance rather than just acquisition of facts;
- Opportunities for meaningful personal

interaction between students and teachers;

- Opportunities for collaborative team learning;
- More authentic methods of assessment that stress task performance in naturalistic situations, preferably including elements of peer and self-assessment;
- Making learning processes more explicit, and encouraging students to reflect on the way they learn;
- Learning tasks that encourage integration of information and skills from different fields;
- Curriculum planning that focuses on realistic student-learning outcomes rather than disciplinary traditions and faculty preferences. By realistic, I mean outcomes that will equip students with knowledge and skills, both generic and discipline-based, that can be transferred to the world beyond the university throughout their lives and careers.

Learning research and departmental practice

Almost all the research I have referred to above was done by psychologists, and often published in mainstream psychological journals – although it would be fair to say that many of the researchers were not based in psychology departments, but in faculties of education or teaching and learning centres. Much of the relevant research that could inform good teaching practice had already begun in the early 1980s when I published my review of teaching methods in Canadian psychology departments. I concluded then, as did Jim, that these studies were largely unknown to most psychologists and – even if known – had had virtually no influence on prevailing teaching and assessment approaches. My impression is that little has changed since 1986, at least in Canada. When I give workshops and short courses on effective teaching it is a rare participant (psychologist or not) who is familiar with the

work of Marton and Säljö, Entwistle and Ramsden, Kember, or Perry, even though their research has direct bearing on university-level teaching and considerable practical implications for the way we go about our work as academics.

This is not to say that psychologists do no research on teaching and learning. For example, the American Psychological Association has long had a Division on teaching, and sponsors the journal *Teaching of Psychology*. There is a similar section in the Canadian Psychological Association, though it is largely dormant. Few of the papers in *Teaching of Psychology* reflect any familiarity with the approaches to learning literature or its North American counterparts. Rather, the dominant research approach involves measuring the effects of a small and controllable instructional innovation on discrete learning outcomes – the latter most usually measured by performance on a multiple-choice test that largely stresses retention of information.

Weimer (1993, 2008) reviewed the many discipline-based journals on post-secondary teaching and concluded that the research paradigm of the papers they publish generally reflects the dominant methodological philosophy and approach in the discipline concerned. This she finds limits their utility and potential to change practice because research done in other contexts using different paradigms is on the whole ignored.

In the case of psychology it perhaps makes little difference since I suspect *Teaching of Psychology* is read by very few faculty members (at Queen's the University Library does not even have a subscription) and would be regarded as a marginal publication when it came to claiming credit for scholarly work in the annual performance review process. Indeed Weimer believes that this is the situation for almost all disciplines when she writes that 'discipline-specific periodicals are not read widely within the discipline but they are not read at all by faculty outside the discipline' (Weimer, 2008).²

² This is an unpaginated web-based journal.

Teaching and change

In his paper Jim comments on the many changes in the Keele psychology department over the past 40 years. Unlike the situation in Britain, large classes have long been a feature of Canadian universities during my time as an academic (I taught an introductory class of several hundred when I arrived at the University of Saskatchewan in 1966). Of course, in Canada we have always had what the British call 'modular instruction' with its concomitants of continuous assessment, credit hours, and cumulative grade-point averages. Since I have worked in this country there have never been external examiners, so we never felt their loss. And we have always relied extensively on assigned textbooks and multiple-choice examinations, rather than reading lists and essays.

Nonetheless, there has been some change. The most striking is the preponderance of women studying psychology – in my last class at Queen's there were only two men in a class of 25 – which has interesting implications for curriculum planning, choice of examples used to illustrate constructs, and the social dynamics of the classroom. Tutorials in Canadian psychology departments were a rarity even in the 1960s, but now they have disappeared almost entirely. Although we have always had huge classes (at the University of Toronto the introductory class is held in Convocation Hall for up to 1800 students), these now predominate throughout the first and second years, and it is only in the final year of the degree that students can expect a 'small' class of around 25.

In the US a psychology programme comprises a number of discrete courses (modules), and the notion of a cohort, such as Jim and I experienced 50 years ago, with a group of students going through the programme in a lockstep fashion, is non-existent. This is a pity, since the possibility of integration, peer support and social cohesion (not to say good friendships) that is offered through the cohort has been lost. Taking a psychology degree in the US has always been a little like choosing a meal at a

buffet. You might select a balanced diet in which all the elements reinforce each other to provide an integrated nutritious balance – but then again you might not, especially if you find certain subjects unappetising or too difficult to digest. And, as the discipline of psychology has grown, so have the specialities and range of courses available to students, with the result that – a few required courses excepted (typically, introductory psychology and statistics) – two students can easily graduate from the same programme with completely different educational experiences.

Lastly, the undergraduate thesis, which was never particularly common in the US, has virtually disappeared, though at my own university it is still a popular option for students, especially those wishing to go on to graduate work – and understandably so, for this is one of the few opportunities an undergraduate has to interact meaningfully with a faculty mentor and undertake a piece of truly independent work.

Future prospects

Will the rapidly diminishing resources available to universities in both Canada and the UK mean the psychology departments keep on as they are now – but with even greater difficulty? Or might the funding crisis provoke a radical re-thinking of the way we approach undergraduate education? For example, when my colleagues complain to me about the impossibility of teaching well with student-faculty ratios around 35:1 I wonder if we need to abandon our traditional ways of thinking about teaching, and about learning, and start afresh.

For example, supposing we were to forget about modules, timetables, and all administrative structures we so much take for granted, and instead assign each of my colleagues one group of 35 and ask them to plan an engaging and challenging programme of learning experiences in psychology that would take three or four years, involve a good deal of independent work, and an entirely new role for the

teacher (more project manager and mentor rather than information repository and gate-keeper). Is this really impossible? Might it indeed be more stimulating and motivating for both teachers and students? Of course it would mean some full and frank discussions about educational goals, and require confronting hard questions about just why students study psychology and what they will do with what they learned.

More prosaically, what are the prospects for change over the next 50 years – in particular for change of the sort I have been recommending to make teaching and learning more responsive to the needs of students and the requirements of an increasingly complex and challenging world? Many (but by no means all) of the faculty members I meet across Canada and abroad would largely agree with the learning and teaching goals I have been advocating here, and even with some of the solutions I propose. But at the same time they would argue that desirable changes are generally impossible because teachers are hamstrung by lack of resources, overwhelming student numbers, and too many demands on their time.

There has been some suggestion that technology might offer a solution for some of these pressures, and indeed systems such as WebCT and Moodle have proved effective for course management and have streamlined a lot of routine teaching tasks. But on the whole I agree with Jim that most educational technologies have served to reinforce traditional (didactic) teaching practices rather than empowering the sort of teaching and assessment changes that educational research suggests are needed.

Another factor in changing teaching is the academic reward structure which increasingly emphasises research and publications, even if it means neglecting undergraduate students. And in Canada the lack of preparation of academics for their teaching

role, and absence of any tradition of continuing professional development, means that many faculty members are largely ignorant of relevant pedagogical research or alternative teaching strategies, and have scant time or inclination to change from the methods they experienced as students.

Yet a further barrier is perceived to be student resistance to change in teaching approaches they already know. For example, Jim believes that British students form their ideas about learning and studying in secondary school. However, evidence from the many focus groups I have conducted with students entering Queen's suggests that they arrive at university with open minds and considerably optimism and idealism, both concerning the nature of the discipline they will study and the process of learning itself. It is only later that acculturation causes cynicism and a regression to the norm. In fact confronting first-year students with huge and largely impersonal classes and multiple-choice tests is about the worst thing we could do to if we wish to encourage risk-taking, self-exploration, and cognitive development.

So the blueprint for change exists, and is grounded in convincing research evidence largely accumulated by psychologists. Yet the barriers and perceived barriers are powerful disincentives. Neither Jim or I will be here in another 50 years to see if our predictions are correct, but I suspect that if we were we would find university psychology departments doing more or less the same things that they do now and did in 1960, but with even fewer resources and even more grumbling.

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