

Experience: An Often Underestimated and Undervalued Part of the Teaching and Learning Process

David Hooper

The last few decades have seen a steady expansion of higher education accompanied by an ever-increasing pressure to monitor and manage educators and hold them to account. In the UK, for example, the government has expressed its desire to increase dramatically, the percentage of students attending university but has had more than a little difficulty in providing the necessary resources. The amount of per capita funding has been reduced, student grants are no longer given, and the introduction of tuition fees and student loans has put additional pressure, not only on the institutions themselves, but on undergraduates, forced to find employment while they study. (In only late January, 2005, one of Britain's most prestigious educational institutions, Oxford University, reportedly under-funded by the Government to the tune of £95 million a year, announced plans to cut the number of British undergraduates it admits and "vigorously" recruit more foreign students who pay the full cost of their degrees. Moreover, the traditional one-on-one tutorial system that has been the hall-mark of teaching at Oxford for almost 900 years is to be reduced, with more teaching becoming the responsibility of graduate assistants rather than "overworked" lecturers.) There has been an unavoidable increase in expenditure within the educational institutions, which, although inevitably considered to be woefully inadequate by those within the profession, has precipitated the adoption of modern management techniques to ensure efficiency. A bureaucracy has developed that has had to be capable of not only managing itself but responding to the pressures of accountability that descend from the government down. External sources of funding, potential employers and others with vested interests now demand evi-

dence of progress. Assessment procedures and evaluations must now be transformed into data that can be measured and recorded for comparison. League tables are currently in place and the pressure is on to cope with a demanding public, a critical press and ever-increasing competition from other academic institutions.

This trend towards wider accessibility of education at the tertiary level is one that most people would find quite laudable and welcome. There is, however, a growing disquiet amongst many within the education system as they perceive that these changes in management style are causing the very nature of what is being managed to change. The new managerial ethos demanding openness and transparency at all levels and greater accountability has resulted in several negative and potentially damaging developments that may have significant implications for both teachers and learners — developments that have been noted and criticised quite extensively in the literature: the danger that the autonomy of the universities may be under threat by increasingly interfering and powerful governments (Bowles and Gintis, 1986; Slater and Tapper, 1994; Edwards, 1998); the danger that the content of what is taught may become distorted and decontextualised as the emphasis moves towards education as a commodity (Tsoukas, 1997); and the danger that the overwhelming stress on accountability leads to a perceived lack of trust amongst academics, who feel themselves gradually less empowered and becoming increasingly demoralised (Power, 1997). This new managerialism has reached the point which Hussey and Smith (2002) suggest has:

“...created a situation in which the economic tail is vigorously wagging the educational dog.” (Page 221.)

The educational system in Japan, whilst clearly not comparable to that in Britain with regard to its structure and organisation, does, nevertheless, share some similarity in terms of current economic constraints and a trend towards greater accountability: universities in Japan find themselves under increasing financial pressure as they prepare to attract a dwindling number of students, and consequently, a decline in

revenue and funding. Moreover, an increasingly autocratic ministry of education leaves many institutions with little room for manoeuvre as the competition in the market place becomes more severe. Changes in the style of management are adopted which, as in the case of the UK, inevitably begin to precipitate a change in what is being managed.

In terms of education, two distinct transformations are becoming increasingly evident: Firstly, education has become a commodity that is subject to the rigours of the market place. The “customers” have to be satisfied that they are getting value for money, with a “product” that is saleable and identifiable. Secondly, the whole process of education must be capable of being monitored, evaluated and assessed. Teachers must state quite clearly what it is they are going to teach, and be held accountable for their success or failure.

It is, of course, quite reasonable to expect universities to have clear aims and objectives, and for lecturers to give adequate guidance regarding the content and methodology of their proposed courses. American universities have long had their mission statements. In Britain, many of the more recently-created universities are tending to follow suit, although the older, well-established institutions still largely adhere to the belief that the role and purpose of such institutions are sufficiently understood to make any such declaration of intent superfluous. Nevertheless, the need for a change in approach to make academics more accountable and be more explicit with regard to aims and objectives is one that many would consider long overdue.

This paper argues, however, that some of the central concepts at the heart of these new modern management techniques are based, not on sound educational theory, but on misunderstandings about the nature of learning, which are detrimental to the whole educational process. In particular, the emphasis on assessment, of both teachers and learners, invariably relies heavily on the prediction of learning outcomes, and consequently denies the possibility of a flexible and adaptive approach to teaching and learning. Attempting to describe in detail the expected learning outcomes for any given course with the hope of monitoring and measuring those outcomes in an objective way as a final measure

of achievement, is based on the mistaken belief that learning outcomes can be framed in advance to exactly specify what is to be achieved. As Hussey and Smith (2002) correctly point out:

“...while learning outcomes have legitimate uses, they have been misappropriated for managerial purposes and ... this misuse has led to their distortion to the point that they are presently ill-conceived and incapable of doing what is claimed for them. Learning outcomes, and the ideas related to them, are in danger of becoming little more than spurious devices to facilitate auditing at the expense of the educational process.” (Page 222.)

Most educational institutions at the post-compulsory level, whether in the U.K. or Japan, would fully subscribe to the notion that their role clearly involves equipping their students with high levels of generic academic skills. However, within the context of the students' chosen fields, there seldom seems to be much focus on how to actually acquire those skills: how, in fact, to learn effectively.

This paper argues that adaptive expertise — that is, an individual's ability to take an appropriately flexible and adaptive approach to any new situation — is particularly relevant to the ability to learn effectively, and that prior experience is an important and integral part of acquiring knowledge and skill; the experience not only that the students bring to the learning environment, but that of the teacher. Experience is often regarded as being of less value than explicit knowledge because it is by its nature more difficult to articulate and quantify. However, an individual's implicit understanding of the world, derived from a unique set of experiences and interactions, is a major source of influence on his or her way of thinking and any subsequent approach to problem solving and decision making.

The view is taken that learning in its widest context is considered to be a change in the understanding of an individual's place in the world and his or her perception of it (Fazey and Marton, 2002). This perspective derives from phenomenology — the study of what teachers and learners can say and demonstrate about their own experiences

of learning. The world, whether it be the physical, social, emotional or conceptual/intellectual world, is, under this view, a product of the dynamic relationship between the individual and those perceptions born from experience (Marton and Saljo, 1976a; Marton and Saljo, 1976b). Reality is not something static that exists for the observer to perceive; rather it is a continually evolving, highly contextual and dynamic relationship between individuals and the environment (Barab and Plucker, 2002). It thus follows that one person's reality is not necessarily the same as another's. With each new experience, that view of reality changes and learning is thus considered to be a change in an individual's understanding of his or her place in the world.

Such a view has several important implications, not least of which is that a person's understanding cannot always be easily distinguished from learning since the former is directly related to the latter. The understanding arrived at by the learner may be a unique understanding, or at least there may be differences in how individuals understand the same system or situation. Each understanding enables individuals to do certain things and respond in certain ways. The variations in the responses of which an individual is capable is thus seen as a reflection of the diversity of those different understandings. Under this view, suggesting that learning outcomes are things that can be accurately predicted and measured objectively is clearly misguided.

This is not to suggest, of course, that lecturers do not need to clearly state what it is they are going to cover in their courses, nor discuss with students their expectations regarding what is to be learnt. The objection is the assumption that learning outcomes are precise and explicit statements, capable of being measured objectively:

"They [learning outcomes] give the impression of precision only because we unconsciously interpret them against a prior understanding of what is required. In brief, they are parasitic upon the very knowledge and understanding that they are supposed to be explicating."

(Hussey and Smith, 2002, page 225.)

This is not to be dismissive of the idea of specifying what stu-

dents should know and understand at the end of a course of study, nor what skills and capabilities they should be able to display; what it does mean, however, is that any interpretation of these outcomes must be made within the context of the subject matter and the requirements of the specific discipline and academic area, and emerge from the current activities and experiences of the students. In other words, the learning outcomes themselves can be neither clear nor precise. Taking the position that learning (and teaching) is context dependent, it is in some senses meaningless to regard learning as a process independent of outcome: the two are, to all intents and purposes, opposite sides of the same sphere (Biggs, 1994). In any event, learning outcomes, however defined, are clearly not capable of being measured objectively. For universities trying to cope with the pressures of surviving in a competitive market place the drive towards managing the institution effectively, albeit often at the expense of good educational practice, is understandable, but not excusable.

This idea that adaptive expertise is akin to effective learning is based on the premise that our knowledge of an environment or system is always incomplete. At any one time, the system is seen as a 'moving target' (Fazey, Fazey and Fazey, in press) — a target that is continually changing and evolving as a consequence of our influences upon it (Walters and Holling, 1990). Developing the capacity for individuals to be able to learn effectively from their experiences is an important part of building knowledge and skill. It requires individuals to be able to vary and reflect upon their experiences and become adept at looking for and adopting different perspectives. New experiences require a balanced judgement to determine whether the existing perspective is appropriate or needs to be changed and modified. The principle of applying 'good thinking' to assist individuals in becoming open to the possibility of changing their current perspective is, after all, arguably the main tenant of a university education.

A considerable amount of research has been done on the ways in which expert knowledge develops and differs from that of the novice. Bransford et al (2000) identify six observations of how knowledge of

experts differs from that of novices:

i) Experts are able to notice patterns and features that are not apparent to the novice. deGroot's (1965) noted that chess grandmasters and less-experienced, yet skilled players, showed no real differences in their thinking regarding the number of possibilities available in a chess move, and the number of counter moves. However, the experts were able to "chunk" pieces of information together in ways which enhanced short-term memory and thus the decision-making process (Chase and Simon, 1973).

ii) Experts are able to organize their ideas and thinking based on established principles and central ideas, thus aiding them in new situations. In physics, for example, novices often rely on the recall of facts or the manipulation of equations to solve a problem; experts tend to consider the application of general principles that might be applied (Larkin and Simon, 1987). The implication here, of course, being that it is more useful at a novice stage to try and develop a basis around which facts may be organized, rather than attempting to simply memorize large quantities of factual information.

iii) Although experts have acquired a vast knowledge base, retrieval of information does not necessitate searching through everything in order to find what is applicable; rather the knowledge is contextualized (Simon, 1980; Glaser, 1992) and thus is not always easily reduced to separate propositions or isolated facts.

iv) Unlike novices, experts can retrieve information with little or no effort. This does not necessarily mean that the expert will necessarily accomplish a task more quickly than a novice, but the retrieval process will place fewer demands on conscious attention, enabling the expert to simultaneously perform a different task (Schneider and Shiffrin, 1985). The factory worker, for example, who has a vast experience of performing the same manual task, can easily carry on a conversation and pay little conscious attention to a skill that has become automated and now requires little cognitive effort.

v) An expert is not necessarily skilful at helping others learn. Indeed, expertise can sometimes be a hindrance: many highly skilled

performers find it difficult to appreciate why something that they find so easy can present difficulties for a novice.

vi) Experts exhibit marked differences in the degree of flexibility they have in being able to meet the demands of a new situation. Although a person may be technically proficient and highly skilled, that does not necessarily mean they can adapt in a highly creative way. Those experts, however, that are not only highly competent but have also developed their understand in such a way that permits them to deal flexibly with novel situations, can be described as having developed “adaptive expertise” (see Hatano and Inagaki, 1986).

What becomes clear here is that defining and articulating expert knowledge and understanding is far from easy: experts may not be able to explain why they know or do certain things. Nevertheless, they have a personal knowledge — “tactic knowledge” (Polani, 1958) — built upon a unique experience of the world, much of which is acquired and assimilated informally (Boiral, 2002). Although qualitative and subjective, it provides the basis for much of the knowledge used by experts to enable them to make informed judgements and decisions. The experienced teacher will demonstrate expertise to address problems by utilizing his or her tactic understanding of the system in which he or she is operating, i.e., the classroom. It is precisely because of the teacher’s experience and understanding that he or she is receptive to different perspectives, and able to take an approach that is adaptive and responsive to the requirements and unique context of the classroom situation. This is not a one-way process, however. The students are also learning how to become more flexible and adaptive in their approaches to new situations — learning how to learn effectively by developing their own adaptive expertise. As Biggs (1994) points out:

“Blaming the teacher is precisely what the accountability movement is about; it sees the teacher as the prime actor, who should dazzle with a fine display of mastery of teaching skills, and other performance indicators of good teaching...but teaching skills are teaching skills only if students learn, otherwise teaching is a spectator sport.”

It is not the intention of this paper to suggest that experience alone should be regarded as a replacement for appropriate research to inform decision-making in the classroom or for developing individual understanding of the learning environment. However, experience has an important role to play in the development of both research and practice. The danger of emphasising organisation and control within a university from a primarily managerial perspective is not only that those with crucial experience and expertise get sidelined (or made to feel so), but such an approach may prevent some of the unexpected and emerging learning outcomes that are so educationally valuable (Megginson, 1994, 1996).

Entwistle et al (2002) have pointed out that, in practice, something in the region of sixty percent of the changes in the focus of attention that occur in the classroom are a result of unexpected diversions from what was originally planned by the teacher. It is these unexpected changes upon which a good teacher is able to capitalise, and from which students who have developed learning skills are able to benefit. Indeed, it is a growing adaptive expertise that often precipitates these diversions in the first place. In the effort to make education more economically efficient and viable it is important not to lose sight of the goal, and restrict the opportunities for experienced teachers and learners.

“Indeed, it may be argued that the most fruitful and valuable feature of higher education is the emergence of ideas, skills and connections, which were unforeseen, even by the teacher. Such events are rare enough without the additional restrictions of specified outcomes imposed upon those involved in the learning process.”

(Hussey and Smith, 2002, pages 228-229.)

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