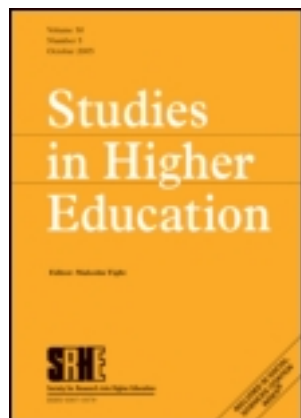




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Improving Teaching and Learning in Higher Education: the case for a relational perspective

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ABSTRACT *The article argues for a particular view of teaching and learning in higher education. A relational perspective links the improvement of the professional practice of teaching with research into student learning. It offers an alternative to paradigms which reduce the complex relations between students, subject content, and teaching to characteristics of instruction and of students, and whose findings and prescriptions often appear distant from everyday teaching problems. Learning in institutional settings is bound up with content and context; isolating general mechanisms that 'good learners' use to learn any subject matter may be less than helpful. A relational perspective conceptualises the teaching and learning process holistically. It involves inquiry into and reflection on how students learn specific subject matter in particular contexts. The results are used to amend teaching and assessment. The perspective has far-reaching implications for staff development and the quality of teaching in higher education.*

Much has been said of late about the need to make higher education more effective. Improvement in anything depends on some sort of notion of what excellence, or quality, looks like in it. This is not an easy thing to decide. A philosopher of our time said that, "Quality is a characteristic of thought and statement that is recognised by a non-thinking process . . . even though Quality cannot be defined, you know what Quality is" (Pirsig, 1974, pp. 200–201). 'Quality' clearly implies a respect for wholeness and breadth, a concern for the process of thinking and acting as well as the products. It is not reducible to 'performance indicators' or efficiency. Quality in higher education is far too complicated and important an issue to be appropriated by decision makers as a means of planning the distribution of resources (see Ball, 1985). I argue here for an approach to improving undergraduate teaching and learning that strengthens and builds on the professional role of higher education teachers as transmitters of excellence.

As university and college teachers, we should study how our students learn in order to discover the elusive but very apparent academic quality described by Pirsig. On this journey we should follow two paths. We ought to study learning because we want to describe what students do; we should apply what we find out to making learning better. These two paths

are intertwined in the approach to studying learning advocated here. It is their intermingling that makes the discovery of quality both exciting and practical.

The problem is to understand the relations between students, learning, and teaching in higher education. In order to improve learning in higher education we do not so much need more research into the psychology of learning or the methods of teaching; we need a different type of research. The alternative way of looking at learning perhaps involves a quite radical shift of perspective for some higher education lecturers; a change in our way of looking at the educational world. It is certainly different from some psychological views of learning, even though it may eventually prove to be a complementary rather than a conflicting approach.

Some Characteristics of a Relational Perspective

A relational view of learning may seem to be easily grasped. This is far from being the case, as may be shown by the example of the concept of 'approach' to learning. This widely influential concept concerns the way which students relate to and organise a learning task. A deep-holistic approach consists in the intention to discover or impose meaning and a focus on the whole task. A surface-atomistic approach consists in attending to the superficial features of the task (such as the need to memorise information) and a focus on local relations within it.

This seems simple enough, yet few educational ideas can have been more widely misinterpreted. Although it is perhaps a harder concept to understand than either acceleration in elementary physics or marginal cost in economics, the most common misconception of approach is analogous to confusing rate of change in velocity (i.e. acceleration) with velocity itself, or cost at the margin with average cost. An approach to learning is a description of a relation *between* a learner and a learning task—the description of an intention and an action. An approach is not something inside a student. It is dynamic: it has the idea of change tied up in it: it only has meaning with reference to a situation and to certain types of content.

However, the concept of approach has been typically misunderstood as a description of an individual characteristic, as if it was indeed something statically located inside a person. Thus debate has been expended on questions of whether people are consistent or variable in their approaches (while logically they must be both), and on the individual correlates of approaches. The fact that there can be no 'surface processors' is nothing to do with whether we prefer situational or personological explanations of learning; it is an inevitable result of how the concept is defined. Seeing approach as an attribute is like asking whether a certain rate of acceleration is a higher or a lower speed than another. 'Approach' is a superordinate concept that happens to be theoretically powerful and educationally valuable.

The distinction between surface-atomistic and deep-holistic approaches to learning tasks is an analogue of the distinction between a holistic and an atomistic view of teaching and learning in higher education. To understand the meaning of the concept of approach in the way its originators intended, one must think about the process of teaching and learning holistically. This way of thinking may be contrasted with one that focuses on parts of the process. If we focus separately on students' experiences, learning skills, students' characteristics, what teachers do, and what subject content consists of, we fail to understand some of the important things that happen when people learn in educational settings. We cannot reduce a relational view to one which concentrates on the parts of the process. When it comes to applying our understanding to improving the process, a relational view has distinct advantages.

Generalisation, Reduction and Prediction

Modern cognitive psychology, studies of the correlates of academic performance and the effects of instructional media, and recent learning skills literature may perhaps be seen as having adopted a view of student learning that is segmented rather than holistic. This may seem to be a tendentious dismissal of major contributions to our understanding of human learning, but is not intended as disparagement. I am arguing for an educationalist's view of learning and teaching, and I believe that educationalists need to see things differently, especially when they apply themselves to the realm of complex learning by students in post-compulsory education.

Cognitive psychology, for example, has been concerned with processes occurring inside the 'black box' of the individual learner. Its orientation is, however, not individualistic; it is towards clarifying general ways of thinking and towards describing the general mechanisms that characterise learning, irrespective of content or differences in the ways learners relate to content. For the practitioner, this way of looking at learning in educational settings sometimes seems abstract and remote from commonsense classroom experience. Teachers and students tend to describe the processes of learning in the language of content and context, rather than mental operations or the structure of cognitions.

Scientists seek the simplest explanations that are in accordance with all the evidence. The educationalist shares this value but, like all good scientists, ought to distrust simplicity as well. He or she may question whether a focus on isolated variables defined by experimenters, deriving perhaps from theories about mechanisms of learning, can detect the important effects of students' definitions of situations on their learning. Once upon a time we believed that educational theories were only real theories if they embodied generalisations of the type 'If situation A, then action Z'. So, we might predict that if a student has (in researcher-defined terms) awareness of his or her own learning processes plus a certain quantity of ability, then this student will produce learning outcome X. An alternative view is that non-trivial law-like generalisations like that are undiscoverable in education. Negative statements are feasible ('If you never get your work in on time and spend every evening watching television you will fail first-year medicine') but on the whole uninteresting. Studies of students' study habits in relation to academic performance (see, e.g. Entwistle & Wilson, 1977) typically show that 'good study skills' explain a low proportion of the variance in academic performance at university. Though there is some evidence that reflective and selective content-related study strategies are associated with better grades (Entwistle & Ramsden, 1983, chapter 8), we are still not sure if these strategies are causes or effects of academic competence (or neither or both). And to jump to the conclusion that teaching such correlates to students will improve their understanding is certainly erroneous.

Why are law-like generalisations difficult, perhaps impossible, to find in this field? The reason is quite straightforward. Students react to educational situations differently from the ways experimenters predict. This is because they react to the situation they perceive, not always the one that researchers and teachers define. It is educationally rather simplistic to believe otherwise. The most competent teacher finds it difficult to predict exactly when a student will deploy a skill. Performance depends not only on ability, motivation, and skills but on whether the student decides they are needed or not, in a particular situation. Saljo (1982) discovered that a highly sophisticated conception of academic learning by no means guarantees that an individual will adopt a deep approach to a particular task, while Fransson (1977) demonstrated that relevance and low anxiety as perceived by students were more strongly associated with success in a learning task than relevance and low anxiety as defined by the experimenter.

Students' Perceptions as Mediators

The subject's, rather than the researcher's, definition of the situation has been the focus of much recent work on learning and studying in higher education (see Marton, Hounsell & Entwistle, 1984). It has become fashionable, at least in Australia, to say that research and development in higher education has forgotten or neglected students and their problems. The implication is that we should be concentrating on developing students' skills and attitudes directly, rather than improving teaching. This would seem to be a misunderstanding. The neglect remedied by the recent work is of the learner's perception of the situation as a critical mediating variable. The research described in *The Experience of Learning* (Marton *et al.*, 1984) grew from dissatisfaction with current paradigms, not from a desire to help students solve their study difficulties. Nor did it arise from a wish to promote student-directed learning. This recent research sees an understanding of students' perceptions as a necessary prerequisite to devising effective teaching strategies; but such strategies may or may not involve particular techniques such as problem-based learning. In this paradigm, the techniques are part of the ground against which teaching for understanding is carried out, rather than the other way around.

The importance of taking student perceptions into account when assessing the effects of instructional techniques was demonstrated in an early experiment by Marton (1976). As other researchers had discovered, successful students focused on the main message in the texts they read, devised strategies to integrate the new knowledge with prior knowledge, and tried to relate the parts to the whole. They did this by asking themselves questions such as 'How are the main points related to the evidence?' Now why not introduce the kinds of questions such good students (automatically) ask themselves into the text, thus eliciting the same level of understanding from the poor students as the good students?

This is a question that has occupied learning skills researchers in America for a long time. Indeed, many of the instructional devices described in a recent, massive compilation of learning strategy research and intervention (Segal, Chipman & Glaser, 1985) aim to teach all students to ask the questions good students do.

After the in-text questions were introduced in the Swedish study, a curious thing happened. Instead of adopting a deep approach, the students narrowed their attention to answering the questions posed ('technification of the task' in the jargon); they focused on the structure of the text in its literal form—paragraphs, key words and sentences. These students actually *understood* the text less well than a control group who had not been exposed to the instructional intervention, although they did become good at mentioning isolated topics they had read about. What had happened was that students had perceived the requirements of the interspersed questions quite differently from the way the experimenter hoped they would.

There would seem to be a message in this experiment for teachers and study skills advisers in higher education. It is not that in-text questions are no good (there are certainly examples of the successful use of in-text questions in the literature), or that there is no point in trying to help students to study more effectively. It is rather that something is wrong with the deficit model of student learning implied in some learning strategies research and the belief that instructional techniques can readily overcome such deficits. It may be unwise to try to improve the quality of learning by observing and charting what good learners do and teaching the poor learners to do the same things. The focus seems to be misplaced; it is on students and interventions separately, rather than on the interaction created through learners' perceptions of the world around them.

What good learners can be observed to do may not be a cause of their effective learning.

What experts do cannot provide a prescriptive manual of study strategies for other learners. The pedagogical difficulties in the view that documentation and transfer of expert strategies is the key to improving novices' learning will be apparent to many teachers. If it were true that all we needed to do was to teach students to learn like experts do, teaching would be an enviably simple task. It is easy nowadays to pour scorn on the idea that old-fashioned study skills training or instructional technology are the magic bullets that will cause the ignorant to perform superbly. But some newer approaches have their eyes firmly fixed on a non-relational perspective. The misunderstanding of the link between descriptive and prescriptive happens partly because these approaches do not have a clear normative commitment to the kind of learning they wish to encourage, and partly because of a belief that it will be possible to discover principles of learning that can be applied uniformly to diverse subject matter. It has been argued that learners' general metacognitive abilities can be developed by intervention programmes that involve training students to identify the learning strategies they use and to assess the value of particular strategies for achieving goals (Wagner & Sternberg, 1984). Those who adopt a relational view would prefer to maintain that thinking skills are inseparably linked to the learner's understanding of content and the context in which the skills are deployed. I have heard people arguing for training students to identify the situations where surface approaches are 'appropriate'. But surface approaches cannot by definition ever be appropriate if lecturers desire their students to understand the complex material they teach.

Can Students be Taught how to Learn?

Attempts to intervene in student learning take many forms. The more modern approaches to 'learning-to-learn' in higher education seem to have the potential to improve study strategies (see Gibbs, 1981; Entwistle & Ramsden, 1983, pp. 206–213). Developing awareness of different learning strategies and students' competence in selecting fitting strategies, while at the same time providing students with a repertoire of study skills (and involving subject teachers in such an intervention programme), would appear to be educationally desirable.

In an effort to test this idea some experimental interventions were planned at the University of Melbourne (the results are fully reported in Ramsden, Beswick & Bowden, 1986). First-year students in Anatomy, Chemistry, History, Psychology and Engineering were invited to participate in a learning skills programme in 1984. The students who chose to participate attended a series of small group sessions organised by the Centre for the Study of Higher Education in conjunction with departmental teaching staff. The sessions involved discussion and demonstration of strategies and skills identified as important by staff and students. While there were some variations between departments in content, topics like managing study time efficiently, appropriate reading strategies, note-taking, examination preparation, and writing effectively were included in each programme. The sessions did not present a set of 'right' techniques that students should follow, but aimed at encouraging students' awareness of different methods. Discussion stressed the importance of selecting strategies that suited students and the subject matter.

We compared the academic progress and the approaches to studying of students who attended and who did not attend the programme. Those who attended (who did not differ from those who did not, prior to the intervention) *increased* their reported use of surface-atomistic approaches, and marginally decreased their use of deep-holistic ones. They did not perform any better or worse than the students who did not experience the learning skills sessions in their first-year assessments.

Interviews of a sample of the learning skills students provided no evidence that they

used study skills metacognitively in order to increase their understanding, but did suggest that they became more strategic in their approaches. There is corroborating evidence from a recent investigation of upper secondary students that learning skills taught metacognitively increase students' reported use of strategic study methods (Edwards, 1986).

These results do not disprove the possible utility of general learning skills programmes, but they cast doubt on the value of attempts to improve student learning that do not take account of how students think about specific content within particular contexts. The results are in accord with a relational theory of student learning. The interviews of the Melbourne learning skills students revealed that students used the experience of the sessions to adapt their approaches to the demands of first-year assessments. In their perception, unlike their teachers', first-year learning mainly required students to memorise large amounts of uninteresting and unconnected material. The motivation to plough through learning materials in this way, plus techniques of organising time to make such work possible, was provided by the programme. So was, for some students, the dubious 'skill' of impressing staff. The students seem to have learned to select 'appropriate' strategies which are at variance with their lecturers' aims. A lot of sustained effort is needed to 'learn' reproductively. As two students, speaking about two very different subjects, put it:

I don't think you have to understand, you just have to be able to recite, which is unfortunate... you can spend all your time memorising things and then you'll go really well but you might not know as much about it... I used some of the techniques they suggested [in the learning skills groups] and they were excellent... I had a motivation problem to get down and do the work. I just wasn't doing it, I wasn't blowing all my hours away doing rote learning. So I thought that maybe if I got motivated to go to that I might be able to put myself into a frame of mind to pick up some hints and some practical advice.

I find that with [this subject] you are being thrown lots of snippets of information, lots and lots of them, and you've got to devise ways to remember little isolated pockets of information... I've got to devise different ways to enable me to memorise these little bits and pieces of information, isolated things... Sometimes lecturers don't express things awfully well, and you've got to work out what they're trying to say. And then most importantly taking your notes, taking as clear notes as you possibly can and then rewriting them when you get home or when the lecture is finished as a memory technique. Now that last technique was one that I didn't apply last year. I felt that as a result of the study skills course it became clear that it was necessary. And that's what I'll be doing next year.

Students actively and critically extract from intervention programmes—as from other aspects of teaching—what is useful to them. 'What is useful' is a function of their perceptions of the requirements of the remainder of their programmes. If the strategic use of surface approaches seems appropriate in a particular teaching and assessment environment, it is not surprising that students may derive such an educationally doubtful advantage from learning skills sessions.

Educational Advantages of a Relational Perspective

We may want to investigate learning processes and outcomes in order to change students by providing them with something they lack; we may also study instructional methods in order to find efficient means of delivering content. Behind these perspectives there often seem to be assumptions about the possibility and desirability of making law-like generalisations

about aspects of teaching and learning. A model of the learner as a person requiring help and guidance in gathering information, together with a set of general learning skills, is implied. The research deriving from this model leads on from studying the correlates of successful performance through to devising 'content-proof' principles for more effective learning.

For example, it has been said that learning is facilitated when learners carry out 'rehearsal' and 'elaboration' strategies (when they copy things down and summarise information) because this influences cognitive encoding processes (see Weinstein & Mayer, 1984). If students are taught these strategies, it is argued that they will be able to apply them to thinking and learning different types of content. These principles are applied through instructional strategies and learning skills programmes and are free of any particular value assumption as to what kind of learning teachers want to see their students do.

When this model is used to plan interventions, confusing and contrary results sometimes emerge. From the point of view of a relational approach the reasons become plain. As long as variation in acts and outcomes of learning in educational settings is seen to be the result of an interaction between content, context, and student, then it is unwise to seek for ways of improving learning by focusing on characteristics of students or of teaching methods alone. Learning skills and instructional methods do not inhabit a separate world apart from subject content and students' perceptions of educational requirements. As long as we accept that students react to their perceptions of educational demands rather than the conditions themselves, then unambiguous causal statements about how certain experimenter-defined situations affect what students do are almost impossible to make.

A relational approach has educational humility. It does not start off by trying to discover general mechanisms of thinking, and it makes no assumptions that differences in learning reflect corresponding entities inside individual students. Rather than searching for general thinking and learning skills and principles of instructional design, it assumes that the study of learning is a means of providing us as teachers with information about how to encourage the changes we want to see in students. These changes imply qualitative differences in the ways learners experience some aspect of reality, rather than the ability only to repeat back what has been learned. There may be no content- and context-free skills in educational settings; learning in these settings always refers to the requirements of teachers and is always the learning of something. As Biggs (1985) has argued, we should not teach 'metacognitive' (learning and thinking) skills, but teach subject skills metacognitively: in a way which emphasises enhanced awareness of how something is being learned. The focus of improving learning should be on the quality of what students learn, not on improving how they learn generally.

Although law-like generalisations are not made within this model, prescriptions and guiding predictions about student learning in real situations most certainly *are* made. A relational approach is not value-free, however. The prescriptions begin from answers to two related questions: 'What kind of learning do we value in higher education?' and 'How do we want to change students?' (rather than from descriptions of what 'good learners' do).

We can, for example, describe the ways in which perceived interest and relevance in a learning task increase intrinsic motivation and make deep, holistic approaches to a task more likely (Laurillard, 1984; Entwistle & Ramsden, 1983, chapter 8; Watkins, 1984). We know that assessment procedures frequently fail to do what we want them to do: that is, to encourage and test quality in students' work. All too often what we really test is not changes in how students understand the world, but something that is an invalid proxy for such changes: the ability to apply algorithmic solutions, the accurate reproduction of information, or even just a knowledge of terminology. The fact that students are aware of this leads them to adopt strategies at variance with their teachers' aims (see Elton, 1982; Ramsden, 1984).

It is necessary for us to devise specific teaching and assessment strategies that capitalise on these generalisations. In the area of assessment, detailed study of how particular procedures are experienced by students seems inescapable if the quality of students' work is to be improved. Steps may need to be taken to reduce in some courses the reliance on quantitative criteria of performance, to introduce more detailed reporting of what students are competent to do, to decrease the amount of assessed material, and to provide clearer messages about what kind of learning is demanded.

If we take a relational view, exactly what has to be done in a particular course of study cannot be specified in advance. As in the case of learning skills, no recipes for improvement can be offered to suit all situations, and the importance of how students perceive any changes cannot be over-emphasised. Newble & Jaeger (1983) report an attempt to modify final-year assessment to emphasise the importance of clinical skills in the School of Medicine at Adelaide University. In 1971 final-year assessment was modified to emphasise the importance of clinical skills. Ward-based assessments replaced the traditional clinical viva. However, the new assessments proved to be less critical than expected—few students failed them. Students responded by spending less time in the wards and more in library study for the remaining, more hazardous theoretical component of the course. Thus the effect of the changes was exactly opposite to that intended, students focusing on being able to reproduce the 'right' theoretical answers; a rational adaptation to circumstances. Subsequently, the staff introduced a more innovative and demanding form of practical assessment. This time the effect was to improve student learning: study habits were less influenced by the theory test and the form of assessment was perceived to be relevant to practice.

The approach to understanding student learning advocated here has certain weaknesses as well as strengths, of course. If we adopt it, we shall not be able to generalise about how the *form* of assessment or teaching (such as the use of interspersed questions or the introduction of practical tests) will influence how students learn. We shall not be able to generalise about how programmes of general learning skills will enhance student performance (although the reflective activities such programmes are intended to encourage can often be successfully incorporated into subject teaching). Nor will this approach, which is focused on teaching, be a substitute for the essential work of academic and personal counsellors who help individual students to overcome study difficulties.

What we can do if we think about learning in this way, however, is to discover something about how our students learn and understand the subject-matter we teach. We may use that information, coupled to the more general knowledge about assessment that has emerged from studies of student learning in institutional settings, to adapt our teaching to the ends we wish to achieve.

This is a practical educational strategy. Attempts to apply it in higher education (summarised more fully in Ramsden, 1986) have been hopeful. For example, Eizenberg (1986) has studied the relation between the pre-clinical anatomy programme and students' approaches to learning in the large medical faculty in which he teaches, and designed changes to assessment and teaching in order to elicit more appropriate types of engagement with the subject matter. A continuing study of clinical problem-solving by fourth-year students (Whelan, 1985, and forthcoming) illustrates the exciting potential of studies of how students manipulate content for improving teaching. It is hoped to model the characteristic processes and processing errors, revealed through intensive interviews of students, in an interactive video format.

In the area of computer-assisted learning in science and engineering, Laurillard (1985) has described the use of research into students' conceptions as a means of designing CAL simulation programmes which incorporate an analysis of the relation between what a student

knows and what he or she needs to know. Martin & Ramsden (1986) report a successful attempt by a British History department to improve students' historical writing by means of a content-specific 'learning to learn' programme that implicitly adopted the principle of teaching students to realise the *genre* appropriate to a question (see Biggs, in press; Hounsell, 1984). Another study, currently in progress at Melbourne, is examining the ways in which Fine Arts students conceptualise Renaissance art and read art history preparatory to redesigning a course on quattrocento art. The common theme of these projects is the implementation and evaluation of teaching strategies that take into account students' experiences of learning. None assumes that the focus of improving learning should be on discovering general processes of thinking or improving individual students' mental operations.

Conclusions: staff development and quality

A relational view of student learning in higher education sees the how and the what of learning as inseparable aspects of learning. Students' perceptions of instructional methods that teachers use to transmit and evaluate the learning of content are adaptive responses. By studying the relation between context and learning, we see how these responses may help or hinder the achievement of the outcomes teachers desire. However, a relational view does not search for content- and context-independent principles of learning, and it maintains that approaches to learning cannot be reduced to their individual and situational components. Its implications for future work on learning strategies training are somewhat pessimistic.

We would do well to view the indeterminacy of this approach as a source of educational strength rather than psychological weakness. Many nostrums have been offered in the search for quality in higher education—educational technology, learning skills programmes, more sophisticated student selection procedures, compulsory evaluation of staff performance. The solution offered by this approach is different, and as deceptively simple as it is truly educational. Only by finding out about how students learn what we expect them to learn can we help them to learn better.

An important aspect of the relational perspective is its unwillingness to disengage theory from practice. Its 'bottom-up' methodology (in contrast to the top-down application of cognitive psychology to education) stresses the fresh realisation of educational principles in each new concrete teaching situation. The major concern is with changes *between* students and their world, rather than *within* students (Johansson, Marton & Svensson, 1985). The approach focuses on student learning not because teaching and teachers are unimportant but because they are very important. Instead of simply trying to supply learners with the thinking and learning skills that we presume they need, we should provide teaching and assessment that will permit able students to realise their demonstrated potential to learn subject-matter.

Eventually it may be possible as a result of studies of content-related learning in academic contexts to reconcile—within a broad relational perspective—holistic and reductionist approaches to understanding student learning. This might be done within some kind of systems theory (see Emery, 1969) or multi-dimensional model like Sternberg's recent theory of intelligence (Sternberg, 1985). There is no logical reason why the dynamics and statics of learning cannot be studied together. The practising teacher, however, is likely to be interested in more immediate problems than the search for complementarity in theoretical approaches.

The essence of good teaching is experiment with ideas and practice (Rudduck, 1985; Stenhouse, 1985). A relational approach encourages teachers to test ideas about learning as a

means of professional development, and offers a way out of the domination of routine practice in higher education teaching. The work that has so far been done is only a beginning, but it is promising. Academic staff who have been involved in these activities report that they are intrinsically rewarding to experts in professional subjects and academic disciplines. They also have the potential to connect the apparently unconnectable: staff research interests and undergraduate teaching. Studying how intelligent neophytes apprehend a discipline reveals its underlying structure from a different perspective and often sheds light on its historical development.

It will also be valuable if staff, even if they do not spend large amounts of time in research into students' conceptions and processes of learning, use teaching time to make students more aware of their ways of approaching particular learning tasks. Reflection on the learning process is rare in many courses, yet it may have a dramatic impact on the quality of learning (see Lybeck, 1981; Gibbs, 1981). Simple activities like asking students to describe how they arrived at the answer to a calculation, or what steps they went through when writing a report, or how they read a chapter, have the added benefit of providing revealing commentaries on students' perceptions of our requirements.

Many of these activities can be introduced quite easily by teachers in higher education. Imaginative teachers may already be familiar with them. No special training is needed. But the exploration of students' conceptions and approaches in order to design courses is not so simple. This needs support and methodological expertise. Technical skills that few teachers will have the time or energy to master are required. No-one becomes an expert in phenomenographic [1] methods overnight, and no institution can expect to see sudden institution-wide improvements to the efficiency of learning through this method (or any other, for that matter).

Staff developers and educationalists therefore have roles to play in the establishment of a relational approach to improving learning. First, they need to provide methodological advice and support. Secondly, they must offer counsel to staff who study learning and implement their findings, just as they offer help to teachers who introduce any innovation into the harsh climate of educational tradition. Thirdly, they must work within their institutions to promote the value of step-by-step means of improving the learning of portions of subject matter. Grand learning skills and instructional design programmes seem out of place. The 'appropriate technology' of smaller, more environmentally-sensitive interventions is likely to be the pattern of the future. Cooperative projects investigating how students conceptualise phenomena, undertaken jointly by subject experts and educationalists, may become a common form of staff development.

Because teachers in higher education are susceptible to the same kinds of situational influences as their students, staff developers have another task to perform. They must find ways of pressing for institutional contexts that reward the study by teachers of how their students learn. It may be possible to argue for recognition of the study of the didactics or pedagogics of a subject as a legitimate research field; this has already begun to happen in some professional subjects. A relational approach sits happily with the non-intrusive form of staff development practised in most Australasian and British higher education. It makes indeterministic statements about the connections between teaching and learning that harmonise with the traditional view that responsible judgement by a self-critical group of academics is the chief means of maintaining and improving research and teaching standards.

At the beginning of this article I quoted from Pirsig's discussion of quality in writing. *Zen and the Art of Motorcycle Maintenance* is an unusual study skills text, but one which is more at home with a relational conception of learning than most. The hero of the novel teaches his students to write more effectively not by providing them with techniques for

better writing, or even by encouraging them to reflect on different strategies. He does it by getting them to recognise what quality in writing consists of, by comparing an essay that has quality with one that does not. The important thing is to recognise quality and to understand how it is discovered. Quality is not about performing well to please one's teachers; still less is it about fulfilling criteria imposed by administrative agencies. It is an outcome of a duty towards oneself to be excellent (see Elton, 1986). We cannot be neutral about quality in any aspect of education; we cannot disentangle quality from content; we should worry less about teaching students how to learn and how to demonstrate their learning, and more about helping them to learn things well.

Acknowledgements

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NOTE

- [1] 'Phenomenography' is the study of how people experience and conceptualise phenomena and ideas in a subject area. It is a distinctive methodology that provides a framework for systematic descriptions of learning (see Johansson *et al.*, 1985, pp. 245-255).

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