Can Universities Learn?

A submission made in a personal capacity to the House of Commons
Education Sub-committee inquiry into higher education,
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by

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Autobiographical note: I have worked in higher education since 1967. I taught for 25 years in the Department of Social Policy at the LSE, during which time I undertook a wide variety of responsibilities, for admissions, examinations and staff-student relationships at department and School level.

Since 1995 I have been an in-house Consultant in Teaching Methods at the LSE. My projects have included a survey of the use of graduate teaching assistants at the LSE and a study of information technology in higher education. I am currently working on pilot projects to 'embed' teamwork in the curriculum, work which is partially funded by BP Amoco. I also organize the School's participation in the BP Amoco Team Development in Universities programme.

In an earlier existence I gained my PhD in solid state physics and worked as a research scientist first in the electronics industry and subsequently at the Building Research Station, the LSE and the Centre for Environmental Studies.

My recent publications include *Making Social Policy* (Open University Press 1997); 'Divided they surely fall: traditional university teaching erodes students' value to employers by failing to develop their team-working skills', *Times Higher Education Supplement*, 6 February 1998; 'How universities fail the learning society', in E. Dunne (ed), *The Learning Society: International Perspectives on Core Skills in Higher Education* (Kogan Page 1999); 'Problem-solving and team-working: equipping graduates for the knowledge economy', in *Managing Learning Innovation* (University of Lincolnshire and Humberside, 1999).

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Part 1

Introduction

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An inquiry into higher education that starts from the quality of the student experience is urgently needed

1.1 Although the Dearing committee commissioned independent research into the experiences and expectations of students, the only research method used was a questionnaire posted to a sample of students: no observations were carried out of what actually goes on in universities. The committee's report[1] barely touched on the student experience.

1.2 *The Learning Age*,[2] a consultative document presented to Parliament by the Secretary of State for Education and Employment in February 1998, is remarkably complacent about universities. Only five of the 61 issues it raises are to do with higher education, and none of those addresses the educational experience that students have. So an inquiry into higher education that takes as its starting point the quality of the student experience is urgently needed at the present time, and it is very appropriate and refreshing that the Education Sub-Committee's inquiry is doing so.

1.3 This submission too is centred on the experiences that students have in higher education, and the extent to which it equips them for a career in the world of work.[3]

1.4 In Part 2 I examine what seems to me to be a fundamental defect in the student experience in the UK, the failure of universities to teach students the most important things they need to know if they are to succeed. In Part 3 I show how universities inhibit the development of students' employability skills. In Part 4 I offer some answers to the question 'What should universities do?', and in Part 5 I address the specific issues raised by the Education Sub-committee.

Part 2

University: where they don't teach you the most important things you need to know

The silence of the academics where 'learning' is concerned

2.1 In everyday life, we use the word 'learning' in many different ways. For example, we use it when we mean

- *memorizing*, like learning your multiplication tables by heart

- *discovering*, like learning something you didn't know before

- *developing skills*, like learning how to be really good at playing a game or working a piece of equipment or leading a team of people, or as a shopper becoming skilled at comparing the value for money of similar products on a supermarket's shelves, or as an athlete or motorist improving your coordination of limbs and senses

- *getting a grip on a subject*, like learning everything there is to know about it and being able to talk and write about it in your own words

- *making sense*, like learning why something you didn't expect happened, or learning to fathom the motivations behind other people's puzzling behaviour

- *gaining understanding*, like learning how a machine or an organization 'works'

- *acquiring expertise*, like learning how to think and approach problems like the experts do, becoming able to recognize particular situations, to suggest what actions might be taken within their context, and to forecast accurately what the consequences of taking such actions would be.

2.2 But what do students find when they get to university and start a degree course? They find it taken for granted that they are in an institution where 'learning' takes place. But it is rarely if ever made explicit to them what they should be doing in the course of learning, and what should be going on in their minds. Implicitly, the message they get is that learning is what they are expected to supply in between receiving teaching and being examined on what they are taught.

2.3 The same gap is apparent from the titles (and content) of the self-help books for students that are on the market. They aren't about learning, they are about the practical techniques of *studying*: *Successful Study for Degrees*;[4] *Studying for a Degree*;[5] *The Good Study Guide.*[6] Derek Rowntree's *Learn How to Study*[7] does have a short section on learning, and in it he testifies to the lack of help that students are given:

But what do you mean by learning? I have asked a number of students this simple question. It often gives them quite a bit of trouble.[8]

And those students who did give him answers did so on the basis of their own efforts to make sense of their experience, not on the basis of what they had been given to understand by their teachers.

Dearing: 'learning' and the general powers of the mind

2.4 The Dearing report had something to say on 'learning'. The Committee heard from 'prominent researchers specialising in learning in higher education' that learning at that level 'can be defined as the development of understanding and the ability to apply knowledge in a range of situations'.[9]

2.5 In the Committee's opinion:

[Any] programme of study in higher education should have as one of its primary intentions the development of higher level intellectual skills, knowledge and understanding in its students. ... [The] development of the general powers of the mind underpins the development of many of the other generic skills so valued by employers, and of importance throughout working life.[10]

2.6 Promoting 'the general powers of the mind' was first put forward as one of four aims of higher education in the Robbins report[11] of 1963. A consultation exercise carried out in 1994 revealed continuing widespread support for these aims, another of which was 'instruction in skills for employment'.[12] Such skills were evidently seen as of a lesser status than intellectual skills, given that they required merely instruction, not education.

2.7 Note how these weighty reports opt for definitions that are abstract, high-level generalizations. They manage to discuss learning in the university context without once (that I have discovered) using the word 'thinking' – possibly the one word that could be used about university learning that would make sense to ordinary people.

2.8 'Thinking' is certainly a term that makes sense to employers too. Looking through newspaper advertisements reveals that they want graduates who can 'think globally', 'think on their feet', are 'relentless thinkers', 'think for themselves', possess the 'ability to think creatively and constructively', and so on. (The remoteness of Dearing and of Robbins and his 'widespread supporters' from the world of work is epitomized in their avoidance of straightforward language in favour of abstraction and generalization.)

A realistic definition of 'learning'

2.9 At this point I wish to offer what seems to me to be a realistic definition of 'learning'. I suggest that a successful student of physics, say, is not merely acquiring and applying knowledge and understanding: someone who genuinely takes to the subject is learning to

be a physicist, and in particular to think how a physicist thinks and to use his or her senses and powers in the way that a physicist does.

2.10 This entails developing the intuition of a physicist, the imagination of a physicist, the 'feel' for the properties of matter and energy in their various forms that a physicist has, a physicist's alertness and powers of observation, and a physicist's attitude to explanation, experimentation and measurement and to the formation and testing of theories. (Inevitably it also entails developing the loyalties of a physicist and possibly too the blinkers of a physicist so far as the approaches of other disciplines to matter and energy are concerned.)

2.11 Likewise historians learn to think and to use their senses and powers like a historian, lawyers learns to think and use their senses and powers like a lawyer, and so on. To put it in a nutshell, they acquire the expertise of practitioners of their discipline or specialism.

2.12 For all practical purposes, then, successful learning – inside higher education as well as outside – amounts to the acquiring of expertise.

How do students acquire expertise?

2.13 How exactly does a student acquire the expertise of a physicist, historian, lawyer or whoever? There is a mystery here. Very few degree programmes, even in vocational subjects, incorporate courses in thinking and in using one's senses and powers – let alone one's intuition and imagination – like a practitioner.

2.14 What seems to happen is that a student who gets a good result, who is adjudged to have learned to be a physicist or historian, say, has done so intuitively, by a process of 'osmosis' that comes about through being exposed to physicists or historians; to their ways of being and thinking and using their senses, to their intuition and imagination, to their methods of enquiry, to their enthusiasms.

2.15 Students at Oxbridge and other institutions that operate a system of one-to-one tutorials in the essay-writing subjects clearly have a head start in this respect. But others who are stimulated by their lecturers, or who get engrossed in research or practical work under the guidance (as opposed to mere supervision) of enthusiastic teachers, or who simply establish rapport with their tutors, will also have a good chance of 'picking up' their ways of being and thinking and using their senses, etc.

2.16 Clearly there are social processes at work in successful learning. (The Dearing report itself acknowledges that 'personal contact between teacher and student ... gives a vitality, originality and excitement that cannot be provided by machine-based learning'.[13]) It seems to exemplify a very important general proposition, that social factors can be very significant in determining whether learning takes place successfully in an educational institution.

The extraordinary discrepancy between teaching and research

2.17 What part does the teaching that a student receives while following an undergraduate course play in this process of osmosis?

2.18 If we compare the modes of thinking that academics propound to students in their undergraduate teaching with those that they themselves adopt in their professional roles – their research and their discussion and debate with their peers – we find an extraordinary discrepancy:

- A historian enquiring into the causes of an event or development works backwards in time. But the results are delivered to students as a narrative going forwards in time.

- A physicist starts with puzzling observations and asks: Why is this the way it is? but succeeding generations of students then carry out experiments not to address the puzzle but to demonstrate the truth of the law or theory formulated to explain it.

- Economists present their subject to students as an analytical one, making use of graphs and equations, but their debates among themselves reveal economics to be a subject rooted in argument, not pure analysis. (One's suspicions are aroused by the fact that the material presented to students by the authors of elementary economics textbooks is often not 'real' data drawn from statistics on economic activity but fictitious data on the supply and consumption of butter, or fictitious scenarios: 'Imagine you are running a squash club ...' To a scientist, the idea of presenting fiction in a textbook is preposterous.)

- To medical students, anatomy is taught in lectures and textbooks as a matter of memorizing the names of parts: they are not taught to think themselves into the minds of the surgeons who did the original naming, or to do the detective work which would reveal the logic behind names.

- The chemistry teacher who in my hearing at a conference in June 1997 described his subject as a 'factual' one clearly has no notion of teaching his students how chemists think and approach problems.

- Law students find themselves being taught 'the law' rather than how to reason as a lawyer.

- A student opening a standard text on government or public/social policy will find a definition of 'policy' which is so general and abstract as to be quite useless for investigative purposes because it doesn't enable you to recognize a policy when you see it.

2.19 I do not assert that these generalizations apply to every teacher and every course. But there does seem to be a common pattern of academics using very different 'mindsets' in their textbook-based undergraduate teaching on the one hand and in their research and professional discussion and debate on the other.

2.20 This divide appears to be widespread and deeply entrenched, not least in the gulf that has grown up between teaching and research, with their competing demands on academics' time and attention and the different company that an academic keeps as a member of a research group and community as opposed to a teacher. It is reinforced by the growing practice of having undergraduate students taught by postgraduates and part-timers, reducing academics' contact with undergraduates to give them more time for the more important work of research. Dearing attests to the way in which the Research Assessment Exercise deflects attention 'away from learning and teaching towards research'.[14]

2.21 The conclusion that I come to is this. There is a disturbing prevalence among academics of two very different mindsets: a research/professional mindset and a textbook-based teaching mindset. It is the latter, with its emphasis on subject matter and conveying the wisdom of the author, to which students are exposed in the formal teaching they receive. They are not taught what is arguably the most important thing they need to acquire, the research/ professional mindset and the ways of thinking and using their senses and powers, the expertise, that go with it.

2.22 A no less serious consequence of the compartmentalizing of teaching and research is that the students' learning activity (undertaken by academics wearing their 'teaching hat') is shut off from their teachers' learning activity (undertaken by the latter wearing their 'research hat'). This cannot but impede any process of osmosis by which students might acquire their teacher's research/professional expertise.

'The function of universities is to mystify students.' Discuss.

2.23 What happens when undergraduates come to be examined and their papers are marked and their degree class decided? Evidence is hard to come by. The meetings of examination boards are shrouded in confidentiality. But there is more than a suspicion that in examining undergraduates, academics are using their research/professional mindset, not the one they use for undergraduate teaching. And that they aren't telling their students this.

2.24 Four years ago, the History Faculty Board at Cambridge, concerned that women were under-represented among those gaining first-class Honours, enterprisingly set their students a mock finals examination and then held a mock examiners' meeting on it. As a mock meeting it was not subject to the normal confidentiality restrictions, and indeed it was video-recorded and extracts from the recording were broadcast on BBC2 in November 1996.[15]

2.25 One of the questions set for the mock exam was on wars. A televised extract from the mock examiners' meeting revealed some of the criteria being used for assessment:

- [The] range of wars discussed was terribly impressive ... all sorts of wars I'd never heard of were here

- I liked some of the allusions to the literature ... [such an allusion] always spices up an essay

- Bringing up the trade wars was I thought a very neat idea

- There was no mention of theories about war, and that might well be a significant failing.

2.26 On this evidence, successful students hadn't merely mastered the subject matter and remembered to bring in theories where appropriate: they found ways of impressing and surprising the examiners – with the lateral thinking they had brought to their reading, their imaginative interpretation of the question, and their skilful deployment of spicy allusions. (It also appeared that male students were more likely to do this by virtue of being more adventurous in their approach, forcefully pursuing an argument rather than presenting a balanced consideration of a range of points of view, and venturing further in their reading.)

2.27 To a considerable extent, what the successful students had done was to get themselves taken seriously by their teachers: their writings were treated as worth paying attention to. They had learned to be – and established their credentials as – 'historians', and were being assessed on that basis.

2.28 Moreover, it is apparent that the skills they had learned to deploy – lateral thinking, using their imagination, making neat allusions – were not ones they had been consciously taught (or their examiners would have been less surprised and impressed).

2.29 The successful students, then, were the ones who had acquired the research/ professional mindset of their teachers, and the expertise that goes with it, without having been consciously taught it.

2.30 Some of these 'successful' students may well not comprehend what they have done or how they have done it. These are the ones who will provide the next generation of teachers who assess what they do not consciously teach. Others comprehend it very well, as their comments testify: e.g. 'It was only in my third year that I twigged what was expected of me' and 'I realized that marks were being awarded for showing evidence of wide reading and demonstrating originality of thought, not for reproducing material delivered in lectures'.

2.31 For other undergraduates, the failure of the teaching they received to help them to acquire the expertise of their mentors has sad and sometimes calamitous consequences. This is especially so for all the middling students who have ploughed through their

textbooks but whose results don't do justice to the work they have put in, and who haven't the faintest idea why. These are the ones who find their university experience mystifying. Such students usually end up with a 2:2, which in some institutions has now become stigmatized, a situation reinforced by advertisements for jobs and courses inviting applications from people with a 2:1 or better. So graduates with a 2:2 regard themselves as failures (and often decline to attend graduation ceremonies). It is ironic that universities have managed to reproduce in higher education the divisive effects of the old 11-plus and the segregation into top, middle and bottom forms in the grammar schools.

2.32 The discomfort that students feel emerges in the Dearing report. Dearing noted that 'fewer than half the students responding to our survey were satisfied with the feedback they got from staff about their work'.[16] Feedback is of course a means of conveying expectations and dissatisfaction with feedback is a clear indication that expectations and criteria are being concealed from students. Their teachers are not telling or showing them what they need to do to get good results.

The textbook culture

2.33 One factor that contributes to the gulf between teaching and research is the 'textbook culture', as reflected in the old saw 'You read for a degree'. And what you read, at least as a start, is a textbook.

2.34 Our system of higher education is built around the textbook. Every course has its curriculum, and nearly every curriculum has its textbook, or a small number of set texts. Teachers, both those in higher education and those who prepare students for university, work to and from the textbook. There are rich pickings for the author who can get his or her book adopted as the textbook for courses. A number of the computer-based learning packages that have appeared in recent years have done little more than substitute the computer screen for the printed page.[17]

2.35 Because our higher education system is organized in this way, all who are part of it or who pass through it are effectively and deeply indoctrinated with the assumption that knowledge and understanding are in the main to be gained from books. They are imbued with the 'textbook culture'.

The damaging effects of the textbook culture

2.36 The textbook culture has some significant and in some cases damaging effects for our whole education system:

- The secondary and higher education systems are inevitably structured around teaching rather than learning. Teaching material is packaged into subjects and curricula and 'transmitted' to students.[18] Pupils and students who prefer to learn by reading, who don't need to be 'doing' at the same time, and who are able to reproduce

what they read in textbooks and to use the material in them to generate 'right' answers, are looked on favourably by their teachers, and rewarded accordingly.

- Pupils and students not reared in a book culture but with other preferred methods of learning – such as experimenting, solving puzzles, watching how other people do things and then trying to do them themselves, or gaining personal experiences and then trying to make sense of them in discussions with other people – find themselves discriminated against. Learning by experience is not valued.

- The system is predicated on the implicit assumption that an individual's aptitude is to be assessed by testing. Testing is carried out by reference to narrowly academic outcomes, such as the number of right answers, rather than to skills. One result of testing is that it inevitably produces a quota of pupils and students who are labelled 'failures'.

- The mindset in which pupils and students are there to be taught then tested is so strongly entrenched that a potentially very fruitful alternative mindset, in which they are appreciated for the talents that they bring with them, stands no chance of gaining a foothold. Teachers do not seek to discover the particular combination of learning abilities and skills and preferences that individual pupils and students bring with them when they embark on a course, or the particular ways in which they use their senses in learning.

- Learning is implicitly regarded as an individual experience (like reading), not a social or collective one.

Part 3

How universities inhibit the development of students' employability skills

The gulf between the academic world and the world of work

3.1 There is in the UK a great gulf between the academic world and the world of work, a gulf in terms of culture. The consequence of this gulf is that many students are ill-equipped to make the transition to the world of work when they graduate. This cultural gulf is manifested in the following five ways, all readily observable:

- the ethos of elitism found in universities

- the different ways of thinking found in the academic world and the world of work

- the esoteric forms of communication fostered in universities

- teacher-student relationships

- academic attitudes to team-working.

I deal with each of these in turn.

Academic elitism

3.2 Perhaps the most striking characteristic of the ethos of the British world of higher education is the elitism – academic snobbery, in common parlance – to be found in it and among those who have passed through it. Of course, competition to be the best and pride in achieving that position are found everywhere. What is special about universities is that they choose to measure themselves by the criterion of 'scholarship'. Unlike criteria such as sales achieved or innovations patented, 'scholarship' can be taken to mean whatever universities want it to mean. And its associations – 'a scholar and a gentleman', highly developed 'general powers of the mind', the prominence of Oxford and Cambridge – are not associations with trade and industry and the working class. But they are associations which can be powerfully implanted during a young person's school and university career.

3.3 The 'pecking order' in higher education is well established. Every league table reminds us who is at the top and who in the lower reaches. The former polytechnics couldn't drop that title quickly enough when offered the chance to style themselves universities (and numbers of their staff were keenly aware of the aspersion implicitly cast on their former status). The honourable exception, which in 1992 became the Anglia Polytechnic University, decided in 1998 that it had no alternative but to follow suit (but has not as yet done so).

3.4 *The Learning Age* claims that our universities 'set world-class standards. The UK is second only to the USA in the number of major scientific prizes awarded in the last five years'.[19] 'We have superb universities and colleges which help maintain our position as a world leader in technology, finance, design, manu-facturing and the creative industries.'[20]

3.5 Intriguingly, in introducing the idea of 'the learning age', *The Learning Age* offers the reader a little history:

> The Industrial Revolution was built on capital investment in plant and machinery, skills and hard physical labour. British inventors pushed forward the frontiers of technology and our manufacturers turned their inventions into wealth. We built the world's first calculator, jet engine, computer and television.[21]

3.6 These inventors were highly skilled and sophisticated technicians, masters of technical expertise, not academics. And it was technicians, working for inventors and manufacturers, who produced drawings, built and tested prototypes, designed and made machine tools and factory equipment, and kept that equipment running. Without them, the inventions of which we are so proud would never have been turned into mass-produced products. They too were people of great expertise. Yet they are evidently beneath the regard of the authors of the Green Paper.

3.7 A similar attitude is evident in the Robbins report. Skills for employment are a matter for instruction, not for education. And Dearing's attitude to such skills is demonstrated by his disparaging treatment of team-working and problem-solving skills, which don't appear in his list of skills 'which we believe ... are key to the future success of graduates in later life',[22] and by his stance that the best way of preparing students for future employment, is by sending them away on work placements,[23] which by their very nature take place away from the university and can be added on to students' programmes with zero disturbance to academics and the timetable.

3.8 If these are the attitudes which prevail in the academic world, they can scarcely encourage students to place a high value on employability skills or to freely opt for a career in trade and industry.

The different ways of thinking found in academic circles and the world of work

3.9 Among academics, there are, I suggest, two distinct ways of thinking that are particularly prominent in their research and writing. I call these the 'thematic' and 'analytic'. The former is commonly found in the humanities and social sciences, the latter in the natural and physical sciences.

3.10 In the thematic way of thinking the 'focus' of one's work is a *theme* of some kind. The definitions that are used are abstract and all-encompassing, and the very goal of one's work is to generalize, to arrive at generalizations. Conceptual frameworks are used to *impose* order. The material used comprises views and metaphors, with the addition of a

selection of facts, survey data etc., juxtaposed to form a kind of 'collage'. The mode of discourse is argument, commentary, deployed in an attempt to persuade others of the correctness of one's point of view, and those others will apply the test of plausibility, which rests essentially on an appeal to intuition. The mode of learning is reflective – 'You read for a degree' – and writers and teachers are effectively interposed (as interpreters and authorities) between student and raw material. A best-selling study guide for students which is rooted in this culture describes 'the classic structure for a short essay' as (1) introduction, (2) points against the proposition, (3) points for the proposition, (4) conclusion.[24] Another section captures the essence of the thematic approach with the unforgettable opening: 'What if you want to support your arguments with evidence?'[25]

3.11 In contrast, in the analytic way of thinking the focus is a *phenomenon*, not a theme, and definitions are concrete, to enable you to recognize something when you see it. The goal is unification – in the sense of achieving mutual consistency – of theories (notably about mechanisms) and observations, and the mode of discourse is the non-judgmental report of findings and discussion of their implications. Conceptual frameworks are used to *reveal* order. The material is 'evidence' (even the one-off finding that is elsewhere dismissed as 'anecdotal'), and the test of validity of one's conclusions is not plausibility but consistency. The mode of learning is essentially experimental. (Teachers who rely solely on textbooks are teaching a way of thinking that can appropriately be described as 'debased-analytic'.)

3.12 In the world of work we find a third way of thinking, different from the two found in the academic world. It is pragmatic, practical. The focus is not a theme, not a phenomenon, but an *issue*, a 'what shall we do?' question. Here the purpose of definitions is to establish a common language among those concerned with an issue, so that 'we all know what we're talking about, and we're talking about the same thing', and the goal is to decide on a course of action and make sure that it gets implemented. The conceptual framework is action-oriented. The mode of discourse is to construct and debate alternative 'scenarios', centred around the perceived need and scope for action, problems and opportunities. Although the results of analytic and thematic thinking may be drawn upon – pragmatic thinking is intrinsically eclectic – much of the material is to do with the particular circumstances of the issue – i.e. it is 'new' – while another major input is the collective experience of those concerned with it. The test of validity is 'Can we do it?', 'Will it work?', 'Will it be acceptable?', 'Will it sell?' The mode of learning is essentially entrepreneurial.

3.13 Graduates who have taken courses with a strong vocational content – such as law, medicine and architecture – will have had some exposure to the pragmatic way of thinking. But most graduates, when they enter the world of work, must adapt to an issue-oriented way of thinking which is very different from the thematic or analytic one to which they have hitherto been exposed, even if they were left to pick it up for themselves. The mismatch, especially between thematic and pragmatic ways of thinking, is profound.

The esoteric forms of communication fostered in universities

3.14 It is a matter of common experience that one of the ways in which we learn is by following the example set by others. In the realm of communication, what example do university teachers provide for students? How applicable in the world outside the university are the means by which academics communicate with students and the forms in which they require students to produce work? How good are these means at promoting learning? Consider four cases: the lecture, the textbook, the 'learned paper' and the PhD thesis.

3.15 The lecture. The duty of the lecturer is to stand up before an audience and hold forth for 50 minutes or an hour in a kind of public monologue. The only other institution in which such a performance is commonly found is the church. In both places, the lecturer personifies authority. As a means of promoting learning it is subject to limitations. It is essentially non-interactive. Students are often torn between listening and trying to take down all the words. If an overhead projector or computerized slide system is used it frequently makes matters worse for students because the lecturer (a) crams too much material on each slide, and (b) can't stop talking while the slide is being displayed, thereby creating even more problems for the note-taker, who will probably be literally in the semi-dark anyway.

3.16 The textbook. The nature of the 'textbook culture' and its consequences were highlighted in Part 2. This too is special to the education system. Like the lecture, the textbook embodies authority. It does not invite criticism, and invariably it does not stimulate curiosity and enquiry. Its capacity to promote learning is limited by these characteristics.

3.17 The 'learned paper'. Publication of articles and papers in so-called 'learned journals' is accorded high status in the world of higher education. An academic's publications and citations of publications in other people's articles and papers count heavily in assessment of one's research. A noteworthy common feature of the learned paper, hardly ever found in publications outside the academic world, is the very extensive use made of footnotes. The use of footnotes in academic publications merits an anthropological study in itself. While some of course are very properly citations of source material or of views which are being challenged or supported, it is hard to discern an intellectual purpose for including others. One is left to conclude that their purpose is more to do with the author's position – to demonstrate how widely read he or she is, to do a favour to those whose work is being cited, and especially to give an impression of authoritativeness. As for promoting learning, undergraduate students are in no position to look up all the references footnoted: they have no alternative but to accept that the references do indeed buttress the paper as the author says. For them, the paper assumes authority by virtue of its extensive footnoting.

3.18 The PhD thesis. The degree of PhD, without which it is becoming impossible to gain admission to the university teaching profession, is conferred on the acceptance of a thesis. The PhD thesis is quite unlike any publication found outside the world of the

university. The required 'literature review' demonstrates a particular 'skill', not useful in any other context, of cobbling together extracts from published material before one has a clear test of its relevance. And chapters on aims and methods are notoriously written not with a view to giving an honest account of what was aimed at and what was done, complete with backtrackings and agonizing rethinks, some very late in the day, but in such a way as to present the best possible defence against criticism, with any weaknesses well concealed. The thesis must appear authoritative. Hence the external examiner's classic probing question: 'If you were doing it again, what would you do differently?' Hence too the difficulty commonly experienced by each generation of PhD students in trying to learn useful lessons about formulating aims and methodology from the theses written by their predecessors.

3.19 It is apparent that these four means of communication are highly specialized, peculiar to the academic world. The idea that teachers who have been conditioned to regard them as normal are well suited to teach students the communication skills that they will need in the world of work is laughable.

3.20 A significant feature of all of these four modes of communication is their stereotyped style, well adapted to conveying authority. Even if the basis of that authority is spurious, the very style of the communication inhibits challenge. This will usually not be what is wanted in the world outside the university.

Teacher-student relationships

3.21 We can gain some insight into teacher-student relationships by observing teachers' treatment of students and attitudes towards them. They may treat students as mere recipients of information (Dearing found that many staff still treat them like this[26]), as a burden ('workload'), and as artful dodgers (at examination time), and regard them as a hostile – if not actually occupying – force: I have even heard them referred to as 'the enemy'.[27] What is striking about the relationships denoted by such treatment and attitudes is how impersonal they are.

3.22 The teacher-student relationship also appears as a relationship with a built-in ambiguity, in which the teacher is on the one hand guide, philosopher and friend to the student and on the other hand judge and assessor. And the Cambridge history experiment offers us yet another characterization: the relationship it reveals is effectively that of a game in which students have to work out for themselves what the rules are for winning – i.e. what the teacher's expectations are when it comes to exams, what approach, style etc. will be rewarded and what will be penalized.

3.23 None of these various kinds of relationship can be conducive to good communication. None is inherently likely to stimulate the developing of rapport between students and teachers, or to facilitate the process of osmosis by which students 'pick up' their teachers' expertise.

Academic attitudes to team-working

3.24 Hesketh, in a study carried out in 1997-98[28], found that employers' levels of satisfaction with the team-working skills of graduates were relatively low, in seventh place of the nine skills examined. This is consistent with what employers told Dearing.

3.25 Indeed, in the world of work it is established as good practice that senior and junior people work together in teams, so the relationships between them are essentially collaborative, especially when there are problems to be solved, with shared goals and collective rewards. Working alongside one another facilitates the developing of rapport between them and thus the process of osmosis by which the juniors acquire expertise. The juniors also learn from each others' experience.

3.26 In contrast, in higher education there is a very strong emphasis on individual learning and achievement. Students find themselves competing against each other. The system gives them incentives not to pool their efforts and share the results. Cooperating with others may lead to charges of copying and plagiarism. And so students are socialized into resisting collaborative working.

3.27 While academics commonly form teams for the purposes of research, so the concept is not unknown to them, these are frequently more like little empires. Teaching has always been very much an individual activity: students are invariably taught by only one teacher at a time.

3.28 In a number of institutions teachers can be found who set their students group projects, but the usual practice seems to be to form them into groups, give them their assignment, and let them get on with it as best they can. Developing teamwork skills requires more than this. A facilitator is required, to draw out and nurture incipient skills. Facilitators require training if they are to be effective (and indeed if they are not to do damage). Without the facilities for providing their teachers with such training, universities are ill-equipped to inculcate team-working skills in their students, especially the skill of generating rapport, which is as important to working in a team as it is to communication. (And in a climate where great stress is laid on individual learning and achievement, attempts to teach students the skill of forming rapport with others may appear very contrived, if not positively hypocritical.)

3.29 As a consequence of graduates having been socialized by their university experience into resisting teamwork, when as new recruits they start their careers in the world of work they arrive with their value to their employer eroded by that experience. Their ability to form relationships that are conducive to effective learning has been damaged.

Part 4

What should universities do?

What are universities for?

4.1 I take it for granted that the role of universities is to educate people beyond secondary education and help them to develop their aptitudes so that they may play a worthwhile part in the social, economic, political, intellectual and cultural life of society.

4.2 But we are living in a new age, an age of communication networks, of widely distributed expertise, of global competition and of rapid and unexpected change. It is also an age in which much learning takes place outside universities – in the workplace, at home, indeed everywhere and in all media where people encounter and interact with one another. Universities, departments and individual academics must adapt to this new age; and they must lead and be responsive to change.

What universities should do

4.3 Universities should
- Give expertise equal pride of place with scholarship

- Think seriously about thinking

- Make their methodology accessible to students

- Liaise with and learn from the world of work

- Formulate workable definitions of learning and assessment criteria

- Take a rigorous approach to modular degrees

- Experiment with learning through team projects (LTTP)

- Overhaul attitudes and practices that damage students' learning-to-learn skills

- Appreciate aptitude as well as test it.

Give expertise equal pride of place with scholarship

4.4 The first step must be to give expertise equal pride of place with scholarship. The leaders of our universities must value expertise, and demonstrate this in their mission statements, in the promotion criteria they apply to academics, and in the standards they set for students.

4.5 The implications of this for our higher education system are profound. It entails changing attitudes. It entails questioning the assumption that learning is inherently book-led. It implies a test of merit that is not restricted to thinking and writing, but includes doing and using one's senses, in ways that can be communicated to others. So it implies asking (and answering) not only the question 'What have you written?' but also the question 'What are you expert at?'

4.6 Potentially a useful side-effect of valuing expertise is that it could stimulate the recruitment of students from working-class backgrounds. The prospect of attaining a high degree of expertise in a discipline or specialism may be rather more attractive to them than the prospect of attaining 'advanced scholarship'.

Think seriously about thinking

4.7 The absence of references to 'thinking' in the Robbins and Dearing reports and in academics' contributions to discussions of education and employment is astonishing, especially when employers are so clear that they want to recruit graduates who can think (see Paragraph 2.8). Thinking is a central activity in the academic world, even if it is disguised as exercising intellectual skills or the general powers of the mind. Thinking like a physicist is a central element in possessing the expertise of a physicist, and so on for every other discipline and specialism.

4.8 In Part 3 I drew attention to the thematic and analytic ways of thinking prevalent in universities and the very different pragmatic way of thinking found in the world of work. It is, I suggest, extremely important (a) that academics be aware of their thought processes, of how they think, rather than take these for granted; and (b) that they be open to the idea of trying out alternative ones. It is important in order to further their own intellectual development. And unless they first do this for themselves, they cannot help students to become aware that there is such a thing as a way of thinking, that indeed there is a variety of ways of thinking, and that it is possible to recognize one when you encounter it in the process of being taught particular subjects or by particular teachers.

4.9 Learning through team projects (LTTP), which I discuss below (Paragraphs 4.29-30), is rooted in the pragmatic way of thinking, so one way of prodding academics into thinking about thinking is to encourage them to make use of LTTP in their teaching.

Make their methodology accessible to students

4.10 The consequence of treating research and undergraduate teaching as if they occupied entirely separate compartments of an academic's life is to erect a huge barrier between the students' learning and the academics' learning. Students don't see research from the inside and aren't exposed to the thinking of their teachers when they are grappling with research questions. The loss to them is considerable.

4.11 One way of breaking down this compartmentalizing, and in the process sensitizing undergraduates to the importance of expertise and helping them to begin to learn it, is for teachers to pay attention to the methodology element in their 'normal' teaching material. It should be standard practice that every taught course should incorporate a methodology component of some kind, be it on methods of enquiry, methods of reasoning or methods of argument. This should apply whether the subject is an analytic one or a thematic one, and especially in the social sciences, where there is a tendency for thematic approaches to be presented by teachers as analytic.

4.12 In some fields, happily, the compartmentalizing of undergraduate teaching and research is already under pressure, as a consequence of the use of IT to give students access to 'raw' data, data which has not been processed and/or interpreted by their teachers or the authors of textbooks. In this situation the role of the teacher becomes, among other things, one of demonstrating methods of handling and 'interrogating' data.

Liaise with and learn from the world of work

4.13 Courses organized around pragmatic thinking are likely to attract mature and other students who have workplace experience, including students who have jobs and are studying part-time, and who consequently can relate to this way of thinking. In the future there is likely to be increased demand for a particular kind of course, one that consolidates expertise and that deepens or widens it (by putting it in a global context, for example). Universities should give thought to the scope for providing more courses of this kind.

4.14 A valuable by-product of such courses is that they are a means of keeping teachers in touch with the world of work. They learn from their students. They themselves learn to think pragmatically. A further beneficial consequence of this is that they become sensitized to changes in the world around them and are accordingly better placed to identify and respond to the challenges of the new age as they appear over the horizon.

4.15 The importance of keeping in touch with the world of work cannot be over-estimated. I am not saying that everything in the world of work is inherently good and to be emulated: far from it, as the succession of management fashions and headlined horror stories testifies. But businesses cannot survive, let alone thrive, if their staff do not learn as they work. It behoves academics to observe how they do this, not least because they might

learn that there are other ways of learning, and other – possibly applicable in the university context – ways of assisting learning besides 'teaching'.

4.16 Institutions should consider requiring academics to undertake workplace experience. There is unanimous agreement that workplace experience is good for students. It benefits them when they return to their studies as well as when they enter employment. Teachers should not be deprived of this beneficial experience.

4.17 One practical step with no funding implications would be to place an immediate ban on sabbatical leave for any academic who has not spent three months gaining experience in an industrial, commercial or service-based workplace.

4.18 A less coercive arrangement could be based on the Industrial Secondment Scheme run by the Royal Academy of Engineering. Secondments to a workplace are usually for 3-6 months, and funding is provided to pay for someone else to do the secondee's teaching for that period.

Formulate workable definitions of learning and assessment criteria

4.19 Teachers require definitions of learning that not only treat it as the acquiring of expertise but will also enable them to recognize it when they see it. This in turn has the great merit of allowing them to make assessment criteria explicit. In these senses both definitions and criteria are 'workable'.

4.20 This definition could vary from one discipline or specialism to another. There is no inherent reason why it should be the same for thematic and analytic subjects, or for subjects that have a high vocational content – like medicine – and those that do not. It should be arrived at by debate among those concerned. And it should pass the test of being comprehensible to the ordinary man and woman in the street.

4.21 One of Dearing's recommendations, endorsed by the Government in its response to Dearing, could help to bring about a move in this direction. This is Recommendation 21, which is that HE institutions begin immediately to develop, for each programme they offer, a 'programme specification' which, among other things, gives the intended outcome of the programme in terms of the skills of various kinds (key, cognitive and subject specific) that a graduate will be expected to possess.[29] Compelling academics to think about skills and make them explicit will be a big first step to getting them to acknowledge the importance of inculcating expertise in their students.

4.22 If academics develop workable definitions of learning in their respective disciplines, they will be brought face-to-face with the discrepancy between the mindset that they purvey to students in the course of teaching and the mindset that they themselves employ in their research and professional discussion and debate, and in assessing students' work.

4.23 This discrepancy must be addressed and resolved urgently. Academics who use their research/professional mindset rather than their teaching mindset when they assess students' work and decide their degree class, subject students to mystification in the guise of receiving education. This should not be tolerated.

Take a rigorous approach to modular degrees

4.24 A particular problem arises in connection with modular degrees. Dearing uncritically cited Robbins on this subject:

> There are unquestionably young men and women for whom study that involves penetration in depth is naturally appropriate. ... Nevertheless there is another sort of mind that at the first degree stage is likely to be more at home in broader fields studied to more moderate depth.[30]

4.25 Dearing believed that students – presumably with 'the other sort of mind' – should have the opportunity to pursue a degree programme that (a) allowed them to 'construct a broad foundation of knowledge and understanding in an area where the student might like to specialise later', or (b) constituted 'a combined degree including a small number of subject areas', or (c) covered 'a wider range of subject areas providing a good advanced general education'.[31]

4.26 The question to ask here is: Whom will these students be learning to think like? The answer is evident: they won't be learning to think like anyone in particular. The risk is that they won't be learning to think in any organized way at all.

4.27 Unfortunately proposals like these give universities the licence to cobble together into so-called programmes – 'pick-and-mix' degrees – unrelated courses provided by a variety of departments. The teachers of those courses may never meet, no overview/integrating framework will be provided for students (for example, to make explicit the different ways of thinking found in different disciplines, or how the different kinds of expertise complement one another), and a student is liable to find himself or herself in a completely different student group for each of the subjects they take and not belonging to any department in the university. The consequent 'bittiness' of such programmes and the absence of a social infrastructure may make them far more taxing for students with the non-specialist 'sort of mind' than those provided for the specialists. They are not a soft option (unless made deliberately superficial).

4.28 No institution should offer a pick-and-mix degree that lacks an integrating framework for students and where steps are not taken to compensate for the heterogeneity of the student groups.

Experiment with learning through team projects (LTTP)

4.29 I use the term 'team projects' here to denote assignments given to groups of students that (a) are based on a task similar to those encountered in real life, but purposefully designed to provide an educational experience; (b) are of a complexity and duration (5-10 weeks) that necessitate the students working cooperatively; (c) require the student teams to produce and present reasoned reports and recommendations and other materials (policies and plans, decision-making strategies, software, organizational structures, etc); (d) are assessed on both a collective and individual basis.

4.30 Experience gained from LTTP programmes at the LSE indicates that it yields the following benefits:

- Team project work offers a very different learning experience from lectures and classes/seminars and individual work on essays or dissertations: it adds variety to the curriculum.

- Students learn to think in an 'issue-oriented' way, addressing 'how can we ...?' and 'how should we ...?' questions, and to harness analytic and thematic thinking for the purpose.

- Because of the requirement to integrate the work of several individuals, students have perforce to develop skills of planning and managing their project work.

- Team project work also offers an opportunity to integrate materials from different parts of the taught curriculum and for students to develop 'integrative' perspectives and skills. The project task can be carefully designed to fulfil this purpose.

- Team projects are of particular value in that it is clear to students where responsibility lies: they are responsible to themselves for their own learning and to their team-mates for making a worthwhile contribution to the success of their project. An element of self- and peer-assessment (which we have already successfully piloted) adds further clarity to the locus of responsibility.

- Team project work offers scope for the provision of teamwork tutoring to assist students to develop their teamwork skills in a context where the relevance of such skills is immediately apparent.

- Team project work with a built-in teamwork tutoring component brings home to students how the ability to work effectively in a team is a 'learning skill' as well as an 'employability skill': not only do students learn from one another, but they discover that when it comes to learning the whole is greater than the sum of the parts. This way of working also demonstrates to them how effective learning can be when it is a social experience.

- In developing their teamwork skills students also develop communication skills and personal qualities. Thus, they discover that good communication is not merely a matter of expressing oneself clearly in good English: it is a matter of establishing rapport with the recipient – getting on the same wavelength – and discovering what he or she wants or needs to know. Similarly they develop personal qualities such as

willingness to learn from others, the ability to act assertively and a sense of when it is appropriate to act assertively.

Overhaul attitudes and practices that damage students' learning-to-learn skills

4.31 One way in which students learn a skill is by following the example set by their teachers. But we have seen that the most striking characteristic of communications in the world of the university is not their content but the way in which their authors use them to convey authority. The effect is to deter students from thinking critically and creatively, certainly not to encourage it.

4.32 Academics should examine all their dealings with students and all the materials that they expect students to read, ask themselves what examples of communications they are setting to students, and either revise/delete them where appropriate or discuss their merits and demerits as communications with students.

4.33 Again, universities might with advantage look at successful companies in the world of work to see how communications are managed in that world, and what can be learned from their example. Particular attention should be paid to how feedback on performance is given, since on the evidence of students' complaints this is seriously defective in parts if not all of the university world.8

4.34 The relationships between teachers and students that are revealed by the attitudes and behaviour of teachers are liable to be not conducive to student learning, as we saw in Part 3. These too should be re-examined rather than taken for granted, and the scope for promoting more colleague-like relationships explored. Students should be asked about their experiences and invited to join in the debate. If pressures to teach more students are leading to a deterioration in the quality of teacher-student relationships, the mechanism by which this is occurring should be exposed. The more evidence that can be produced, the greater the likelihood that attitudes can be changed and pressures that detract from learning resisted.

4.35 There might again be the possibility of learning from the world of work. If tutors functioned as managers and facilitators (and were trained as such), and treated students as their junior colleagues, this could only assist the process of osmosis by which the latter acquire expertise and ways of thinking and using their senses from their seniors.

4.36 When undergraduate students are doing work that involves thinking pragmatically – be it project-based learning or using case-studies or 'raw' source materials – the role of the teacher (and his or her relationship with students) is necessarily different from the role they assume when the work involves thematic or analytic thinking. Whereas in the thematic 'mode' the teacher is interposed as interpreter/authority between student and raw material, and in the analytic mode may simply act as a transmitter of 'knowledge' (unless closely involved in students' practical work), in the pragmatic mode the teacher is

called upon to act as a combination of guide, philosopher and friend to the student, and to share expertise and experience with him or her.

4.37 Academics should also ask whether their current attitudes and practices are encouraging students to form the collaborative relationships that are conducive to effective learning, or are socializing them into very individualistic behaviour. Making greater use of project-based learning that incorporates team-working is clearly one way of doing this. There is of course an obstacle to this in the shape of the requirement to give students individual marks, but peer assessment can be used and yet again something could be learned from good practice in the world of work, where there are well-established techniques for assessing the contribution of individuals to the work of teams.

Appreciate aptitude as well as test it

4.38 I made the point in Paragraph 2.36 that the UK education system is built on the implicit assumption that an individual's aptitude is to be assessed by testing. This Procrustean mindset is so dominant that it drives out the potentially very fruitful alternative of appreciating aptitude.

4.39 This could be extremely wasteful in the 'learning age', as increasingly diverse cohorts of students enter university each year, bringing with them wider and wider ranges of experience. Because learning is a process that necessarily involves students in building on a foundation formed by their past experiences, teachers will need to gain some understanding of what that foundation is in each student's case before they can present materials and learning methods in ways that make sense to the student.

4.40 This will require teachers to 'reach out' to students and to redesign many first-year courses to incorporate at their outset a diagnostic, 'appreciative' component. This is a far cry from seeing teaching primarily in terms of transmission of information, which Dearing concluded that many staff still do.[32] But it is needed urgently.

4.41 The attitude prevalent in many parts of the academic world towards the world of work needs to be challenged. It doesn't seem to have occurred to the Dearing committee and the authors of *The Learning Age* that universities and academics might learn something from the world of work. Arguably it is this fact, more than any presented in the two documents, which sums up the problems of the UK in facing up to the challenge of the 'learning age'.

4.42 Academics need to learn to appreciate people with technical talents and expertise. Such people are often highly gifted: creative, ingenious, and skilled at diagnosing and solving problems, and at translating ideas into action. Operating more intuitively perhaps than 'scholarly' academics, and using more senses and in a wider variety of modes, they are quick on the uptake, and good at 'sussing out' how systems work. They take pleasure in producing solutions that are elegant, functional and economical in their use of material and other resources. They learn experimentally and by experience, but that does not

mean to say without intellectual skills. An important part of experiential learning is thinking about and making sense of experiences.

4.43 Academic snobbery, and the concomitant undervaluing of any expertise that is not accompanied by 'scholarship', has resulted in British universities according technical occupations a dismally low status. (The current shortages in some employment sectors may be one result of this.) Millions of Britons in or aspiring to such occupations are regarded as requiring only training: they aren't yet seen as deserving the full realization of their potential, or indeed higher education.

Conclusion: the need to reinvent the university culture

4.44 Taken together, the suggestions I have made in this part of my submission amount to reinventing the university culture. In certain respects, notably deep-rooted assumptions and attitudes towards students and towards the world of work, that culture is fundamentally anti-learning. It needs to be reinvented. The population at large has long been sending the same message, by using the word 'academic' as a synonym for 'hypothetical' and 'irrelevant'.

Part 5

The issues raised by the Education Sub-committee

How is 'quality' in teaching and learning defined?

5.1 I am saddened by the modern fashion for compartmentalizing education into 'teaching' and 'learning'. This division is spurious. High quality education takes place when academics and students are engaged energetically with each other. At least some reviewers working for the Quality Assurance Agency recognize this engagement very well when they see it during their visits to high-performing departments, as their reports attest. Treating 'teaching' as an entity in itself reduces it to 'delivery' and 'provision', as the new quality assurance framework published recently by the QAA demonstrates (see Paragraph 5.4).

5.2 My view is that education is of high quality when, through energized engagement between academics and students, the latter succeed in acquiring the expertise of practitioners of their discipline or specialism: the ability to be, to think and to use their senses and powers like a practitioner.

How is teaching quality measured and assured?

5.3 The quality assessment and subject review reports published by the QAA and its predecessor in recent years reveal significant variations in approach by the assessors/reviewers. Under the heading of 'student achievement' one report may cite examination results, the level of satisfaction expressed by students with their education, and the level of rapport observed between staff and students: another report may omit mention of all of these.

5.4 Under the QAA's new quality assurance framework teaching and learning will be assessed by having reviewers 'look at the effectiveness of delivery in relation to curriculum content and programme aims'.[33] It is not apparent where the quality of the student experience will enter into the assessment.

How does teaching quality vary and on what does it depend?

5.5 The Sub-committee's questions about the extent to which teaching quality varies between different disciplines and institutions and is affected by increased participation in HE are pertinent to issues of policy and funding. It must be beyond any single individual or institution to provide answers: it should be the responsibility of the QAA to do so, subjecting reviewers' reports to cross-disciplinary and cross-institutional analysis.

5.6 As to the benefits and drawbacks of employing students in teaching, experience at the LSE has shown that post-graduate research students are capable of making a very valuable contribution, taking classes in support of lectures given by full-time members of the academic staff. For their potential to be realized, however, certain conditions must be fulfilled. They must receive training in leading classes; they must have office and mail facilities, so their students can find and contact them; they must have secretarial support; and most important they must be supervised and supported by the academic leading the course, whom they should be able to consult whenever necessary. Overseas students need to have excellent command of English.

How do institutional arrangements affect the quality of the teaching and learning experience?

5.7 The Sub-committee raises the question of the balance between research and teaching. If academics are given to understand that research will count more heavily than teaching when they are considered for tenure or promotion, the incentive to skimp on teaching will be very strong.

5.8 But there is also a question of the link between research and teaching. As I argued in Paragraphs 2.17-2.22, if students are to acquire their teachers' expertise it is imperative that research and teaching should not be compartmentalized, because this shuts off the students' learning activity from that of their teachers. If students are to have a top-quality educational experience, their teaching must be research-led.

How do funding allocation mechanisms affect the nature of teaching and learning?

5.9 The existence of separate grants from the Higher Education Funding Council for England (HEFCE) for teaching and research tends to buttress the compartmentalization of those two activities, with deleterious consequences for the student experience that I have already described.

5.10 However, HEFCE has recently, in partnership with the DTI, DENI and the DfEE, established a Higher Education Reach-out to Business and the Community Fund. 'This fund is intended to initiate a permanent third stream of funding ... to reward and encourage HEIs to enhance their interaction with business. It will provide a platform of core funding to help them to put into practice organisational and structural arrangements to develop and implement strategic approaches to their relations with business, and to assist in activity to improve the transfer of knowledge and skills.'[34]

5.11 HEFCE wishes to achieve, among other things, 'systematic and sustainable change within HEIs and in how they relate to business, particularly changes in institutional and academic cultures, to attach greater value to activities which are relevant to the needs of employers and business and which contribute to wealth creation and national competitiveness'.[35]

5.12 This approach has both dangers and opportunities. While some employers certainly want to take on students who can think for themselves, others may envisage the role of universities as one of merely delivering knowledge to students (or worse, of teaching them the numeracy and literacy that they didn't acquire during their secondary education), or of training them for specific jobs, and place no value on an ability to think critically and creatively or see a wider picture. One would not wish to see universities forced into meeting 'the needs of employers and business' in such a meagre and narrowly-conceived way.

5.13 On the positive side, if the HEFCE initiative leads to academics paying some attention to how learning is done in the world of work; appreciating the pragmatic, practical, issue-oriented way of thinking of people in that world; discovering that teamwork leads to good learning as well as to good products; and examining their own academic culture with fresh eyes, the consequences can be nothing but good.

How does mode of attendance affect the quality of the teaching and learning experience?

5.14 The quality of a student's experience will be affected by many factors besides mode of attendance: age and life experience, family responsibilities, living conditions, whether he or she has to work to earn money during term. What *can* safely be said is that students learn much from one another, and that learning is encouraged by taking place within an *atmosphere* of learning. The question to be asked about distance and ICT-based courses is: How is this social dimension to be provided?

How do changing patterns of student support and student income affect the quality of learning?

5.15 More than ever before, financial pressures are forcing some students to divert time and energy from learning to earning. For others they create a constant anxiety which is also not conducive to learning.

How accountable are universities for the quality of the student learning experience, and how could this change?

5.16 Students are increasingly seeing themselves as having rights as consumers of the education provided by their institution. To the extent that universities concede the legitimacy of students' specific claims to quality of education, the freedom of action of institutions, departments and individual academics – in allocating resources, in deciding what to teach, in giving marks for work – will become circumscribed. Issues may well arise of what exactly students have a right to and of the nature of the contract between student and university.

5.17 Could universities that produce codes of practice for teaching and supervision be held liable if those codes are breached and students disadvantaged thereby? The work of the QAA could be relevant here. For example, if the QAA pronounces that a department's teaching and learning provision is 'failing', will a student who fails an examination or gets a lower grade of degree than he or she was given grounds to expect be able to secure redress in the courts? We are in uncharted territory here.

To what extent are universities involved with their local communities? Would greater involvement affect the nature of the student experience?

5.18 Under the Student Tutoring Scheme sponsored by BP Amoco more than 150 LSE students each year regularly spend a morning or afternoon each week in the classroom of an inner London primary or secondary school. They provide academic help to pupils under the teacher's supervision, they raise pupils' aspirations and act as positive role models. They encourage pupils to study hard and aim for a university education when they leave school.

5.19 The students are volunteers, and their participation is greatly appreciated by both pupils and teachers. The students who take part report that they gain in confidence, they improve their time management and presentation skills, and they develop organizational and communication skills, not least through team working with the teachers. They also have the satisfaction of taking part in challenging and worthwhile community service.

5.20 The LSE also runs a Saturday Schools Scheme, now in its second full year, whereby around 150 6th-form pupils from impoverished areas of east and south-east London and from families with no university background come to the School on Saturday mornings to receive two hours of A-level teaching and to use the School's excellent library and IT facilities. The scheme is part of the LSE's strategy to widen access opportunities to state school pupils in London and in particular to those from more disadvantaged backgrounds.

5.21 Potential Saturday School students must meet the following criteria: they should not be on course to obtain the entrance requirements of the LSE and their parents should not have been to university. In addition they must have the necessary commitment to benefit from the scheme. Because many of these students need to work on Saturdays they are paid £3.00 per hour to attend and their travel expenses are also reimbursed.

5.22 The LSE Student Tutoring Scheme and Saturday School initiative provide practical help to pupils and sixth form students, and are warmly appreciated. They encourage those with potential to feel that higher education at a university, such as the LSE, is within their grasp.

5.23 I would expect that any activity that generates a mutual understanding between universities and people in local communities can only be to the good. Academics and students will gain an appreciation of the learning that takes place outside institutions of higher education; local people will gain an appreciation of the relevance of universities to

the 'real world' they inhabit. Perhaps the word 'academic' might in time cease to be used as a synonym for 'hypothetical' and 'irrelevant': that would be a gain indeed.

Notes and references

1 'Dearing', Report of the National Committee of Inquiry into Higher Education (Chairman Sir Ron Dearing), *Higher Education in the Learning Society* (NCIHE 1997); Report 2, *Full and part-time students in higher education: their experiences and expectations* (NCIHE 1997)

2 Cm 3790, *The Learning Age* (Stationery Office 1998)

3 Like the authors of *The Learning Age* I use the expression 'world of work' to denote the world outside the university, but I do not intend to imply that academics and students do not work.

4 R. Barnes, *Successful Study for Degrees* (2nd edition, Routledge 1995)

5 P. Dunleavy, *Studying for a Degree* (Macmillan 1986)

6 A. Northedge, *The Good Study Guide* (Open University 1990)

7 D. Rowntree, *Learn How to Study* (3rd edition, Warner Books 1988)

8 Ibid., p.14

9 Dearing, ¶8.6

10 Ibid., ¶5.18

11 'Robbins', Report of the Committee on Higher Education ..., *Higher Education* (HMSO 1963)

12 Cited in Dearing, ¶ ¶5.7, 5.8

13 Dearing, ¶8.21

14 Ibid., ¶8.9

15 *Firsts among Equals?*, broadcast on BBC2, 5 November 1996

16 Dearing, ¶8.17

17 HEFCE, Evaluation of the Teaching and Learning Technology Programme, June 1996: 'TLTP was exploited to computerise material that was being taught ... in other ways.'

18 Dearing, ¶8.14

19 *The Learning Age*, Introduction, ¶21

20 Ibid., ¶9

21 Ibid., ¶3

22 Dearing, ¶9.17

23 Ibid., ¶¶9.26-9.32

24 A. Northedge, *The Good Study Guide* (Open University 1990) p.164

25 Ibid., p.191

26 Dearing, ¶8.14

27 This wasn't at the LSE.

28 A. Hesketh, 'Wish list for workers', *Times Higher Education Supplement*, 20 March 1998

29 Dearing, p.141

30 Ibid., ¶9.6

31 Ibid., ¶9.9

32 Ibid., ¶8.14

33 Reported in *The Times Higher Education Supplement*, 28 January 2000

34 HEFCE Invitation 99/40, Annex A, ¶5

35 Ibid., ¶8a