

Meanwhile, the boards that set examinations for sixteen-year-olds continue to devise examination questions that produce a good spread of results correlating positively with the results of other examination questions and which also satisfy the (counter-productive) demand from employers for a wide spread of grades by cramming in such a range of questions that teachers are hard-pressed to cover the syllabus in time. Not surprisingly, education in general, and science education in particular, suffers: the examinations test stamina and quick-wittedness as much as any skill applicable in real life. At primary school level, science education depends on one thing only: whether there happens to be a teacher in the school who knows anything at all about science. Often there is not.

Not content with challenging the historical basis of the school curriculum, Sir Keith Joseph wants also to introduce public examinations that record absolute levels of attainment ("criterion referencing") to replace the present system, which is based largely on the assessment of performance relative to that of others ("norm referencing"). Practical difficulties aside (who could decide an absolute criterion for, say, appreciation of English literature?), this proposal could easily become a red herring. The year on year correlations made by examining boards ensure that the present system is not totally lacking in objectivity. But the real reason why the present two-tier system of examinations at 16-plus urgently needs unifying is that it is unjust.

The CSE examinations intended for the middle 40 per cent of the ability range have, over the years, become more and more similar in content to those (O levels) intended for the top 20 per cent of the ability range. There are no examinations designed for the 40 per cent of students at the bottom of the ability range although, under pressure from parents and teachers, many of them do attempt CSE. For similar reasons, many who should be taking CSE take O levels. The interest of the student is not best served by pressing him to take an examination in which he will probably score badly. To add insult to injury, those who do obtain high grades in CSE are often deemed by ignorant employers to be inferior even to failed O level candidates. In Sheffield, Sir Keith Joseph seemed to be hinting that he might back away from a commitment to establish a unified system of 16-plus examinations. The clear need is for a single set of achievement-related tests that would be of real value to future tutors and employers alike. An attempt to compromise on this issue could easily be disastrous.

What is it all for? Sir Keith Joseph says he intends to improve educational standards to the point where 80–90 per cent of students achieve the levels now reached by pupils of average ability at age sixteen. The variation of examination performance between schools suggests that this ambitious goal is feasible. To succeed, however, the goodwill of the teaching profession will be needed. Sir Keith's speech in Sheffield, in which he went out of his way to compliment teachers in general, is a welcome sign that he recognizes that reality.

But teachers will need more than a pat on the back. Science achievement in schools is being constrained by inadequate resources, as shown by studies carried out by the Department of Education and Science's assessment of performance unit, while the annual reports of Her Majesty's Inspectors of Schools show that, for example, 60 per cent of schools are inadequately provided with textbooks and 20 per cent have serious equipment shortages. It is arguable that some local education authorities are not fulfilling their statutory obligations under the 1944 Education Act. Even more important, shortages of teachers in key subjects (especially mathematics and physics) have meant that many vacancies are being filled by inadequately qualified people. Poorly motivated and under-confident teachers are unlikely to be an inspiration to their charges.

The reason for this state of affairs is not hard to find. Two years ago, a committee under a the chairmanship of Dr Wilfred Cockcroft established that qualified mathematics teachers, for example, then earned £1,000–£2,000 less per year than their counterparts in industry and commerce. Since that time, circumstances have deteriorated, and the present salary structure of

teachers is made incoherent by the problem of falling school rolls.

It is perhaps a blessing that the long recession is not ending quickly, for then the teachers now in posts requiring special skills would be snapped up by industrialists out head-hunting. Sir Keith Joseph now seems to recognize that this problem will not disappear unless there are more resources in the system to keep teachers at their desks — and seems willing to press for extra. Not before time, it will be agreed.

Part of the trouble with the British school education system is that it is commonly regarded as a system on its own, with nothing in common with educational systems elsewhere. Yet this is precisely the time when, in the United States, the federal government has also woken up to the crisis in the schools, has uttered a series of clarion calls for improvement — and has found that the managers of the school systems are ready to respond (at least for a time). In both countries, the underlying problems are very similar, as they are in industrialized Western Europe as well: increasing professionalism in adult work, and the increased demands of the school curriculum, make teaching seem a backwater profession. If it is underpaid as well, the consequences can be calamitous. Teachers with professional skills outside the classroom will simply melt away — or worse, will be replaced by teachers who claim but in reality lack them. In the United States, many school systems have seen the way the wind is blowing, and have chosen to pay the teachers they need to keep above the odds. In Britain, the system of nationally negotiated salary scales will make the solution more expensive. But there is no choice.

That is one battle the minister will have to fight. Another, closer at home, is the battle he will have to fight within a government which, throughout the past five years, has been even-handed in its meanness towards the different sectors of the educational system but, at the school level, has taken advantage of falling school rolls hugely to economize. Now, as the minister seems to have realized, the process has gone so far that students are being denied opportunities that they, and ultimately the rest of us, would profit from. But at a time when public economy is still all the rage (and economically necessary as well), will he be able to wring the funds he will need from his colleagues, and if so, at whose expense? □

You are not what you eat

Too much cholesterol in blood is bad for people; the same is not true in food.

A NEW study from the National Institutes of Health (NIH) on the benefits of lowering cholesterol levels has predictably set off another wave of bad advice from the dietary pundits who have never been able to distinguish between cholesterol in food and cholesterol in blood. What the study did show, and show conclusively, is that high-risk patients — those with blood cholesterol levels over 265 mg per dl — are significantly less likely to have a heart attack if they can reduce those levels to something closer to the US national average of 210 mg per dl. Almost 4,000 men, all members of this high-risk group, were tracked for more than 7 years; all followed a reduced-cholesterol diet, but half were in addition given a drug to reduce blood cholesterol. The test group, which reduced its blood cholesterol levels by about 17 per cent on average, had 24 per cent fewer fatal heart attacks and 17 per cent fewer non-fatal heart attacks than the control group, which managed only a 3.5 per cent reduction in blood cholesterol.

What the study did not show is that the general population would benefit at all by restricting cholesterol in the diet. Early studies, indeed, have shown that it makes little difference whether one's blood cholesterol level is 210 or 230 mg per dl — the benefits that come from reducing blood cholesterol are far from linear. Dietary cholesterol, according to this and earlier studies, makes too little difference to those who really need to do something about the cholesterol in their blood (and who, the NIH study suggests, may well benefit from drug therapy) and is simply irrelevant to those with average cholesterol levels. □