Prescribing Teaching Methods

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Teachers are no longer simply being told what to teach, but also how to teach it. It is important therefore to examine whether some prescriptions of teaching methods are acceptable while others are not, and to justify opposition to certain forms of prescription. I show that some attempts to prescribe teaching methods are either empty, or incompatible with holding teachers to account for the pupil learning which is supposed to result. My argument does not depend on making any value assumptions about ultimate educational aims. Examples from the National Literacy and Numeracy Strategies are discussed.

INTRODUCTION

In the United Kingdom both the Department for Education and Employment and the Teacher Training Agency urge primary teachers to use the ‘methods that work’, especially when teaching literacy and numeracy. They say that research evidence favours specific teaching recipes for maximising pupil learning outcomes in these subjects. The education press is full of advertisements for so-called ‘Literacy Consultants’ and ‘Numeracy Consultants’. The successful candidates may be required to provide ‘demonstration lessons’ as part of their duties. We are not told precisely what they must demonstrate. Presumably it is the so-called effective teaching styles already mentioned. Practicalities dictate that the expert pedagogues cannot be observed for long by practising teachers. Hence the methods must be relatively straightforward, detectable from one or two lessons, and such as to be employable by observing teachers in their own classrooms. Or at least, so it would appear.

Shirley Pendlebury (1995) observes:

If we can have no comprehensive understanding of practice, if there are no common features to be grasped in preparation for new situations, then how can practice be taught? Even the contention that practitioners learn through trial and error is untenable under these circumstances. Here practice is at the mercy of luck.

This point seems to strengthen the hand of the advocates of ‘effective methods’. What is the expertise of the good teacher if it is not the
successful implementation of appropriate teaching methods in the classroom? In what can learning from more experienced colleagues consist if it is not some kind of emulation of their teaching methods?

Here is the basis for a fundamental criticism of one standard view of teacher training (though that was not Pendlebury’s intention). The standard view may be outlined as follows. Student teachers should be helped during their initial training to make ‘intelligent’ or ‘appropriate’ selections from a wide range of teaching strategies, styles and approaches. Some of these strategies will be directly presented on their ITT course while others are gleaned from teachers in school, and from pedagogical literature. Students should be supported in their development of informed reflection on their practice. Such reflection contributes to their choice of teaching methods and will sometimes enable them to initiate fresh approaches. Their teaching decisions, though informed by principle and learned strategy, are often legitimately specific and unique responses to particular contexts.

Many teacher trainers take this view. In consequence they may well be criticised for refusing to advocate the ‘methods that work’. Students themselves suggest from time to time that their trainers must or should ‘know how to do the job’ and that they are not letting them into the secret. Some beginning teachers weary of the exhortation to reflect on their practice. They would much prefer to be given direct teaching advice that will ensure that they survive in the classroom and that their pupils will learn.

In the light of all this it seems important to try to distinguish between some prescriptions of teaching methods which may be wholly virtuous and beneficial, and other prescriptions that should be resisted. There are many different kinds of methods or approaches that might be laid down. Their conceptual and logical properties vary significantly. Exception could be taken to some prescriptions on the basis of a range of value considerations. However, I want to concentrate on objections to selected prescriptions that turn on some of their conceptual and logical features.

I do not intend to consider opposition to prescriptions that assumes contentious value positions, or distinctive aims for education that are not widely shared. For instance, many years ago Charles Bailey wrote compellingly about the importance of teaching autonomy (Bailey, 1980). On one understanding of ‘autonomy’ the autonomous teacher might seem to be a professional whose actions are not subject to prescriptions of certain types. So we might feel that it would be appropriate to look to Bailey in our efforts to resist prescription. However, Bailey held that teachers were part of an education system whose chief purpose was to help sustain a liberal democracy. This conviction cannot be assumed to be shared by the British government, or indeed by anyone attempting to impose methods on the teaching force.

Moreover I do not want to reject the prescription of teaching methods because of a hostility to ‘technical rationality’ (Schon) as applied to teaching, even if that hostility is justified. ‘Technical rationality’ in teaching would amount roughly speaking to the following: the desired
aims or ‘ends’ of teaching are certain learning outcomes; we can discover the most efficient and effective means by which these ends may be attained; the means in question may be thought of as techniques, or as a technology for achieving the learning outcomes. Hence the teacher in possession of technical rationality will employ these means in order to obtain the said learning outcomes.

Schon (1983, p. 41) observes:

Technical rationality depends on agreement about ends. When ends are fixed and clear, then the decision to act can present itself as an instrumental problem. But when ends are confused and conflicting, there is as yet no ‘problem’ to solve. A conflict of ends cannot be resolved by the use of techniques derived from applied research.

Schon would certainly hold that ends are not ‘fixed and clear’ in educational contexts, and that it is only in interaction with the social, cultural, cognitive and practical complexities of such contexts that agents are able to begin to formulate and seek particular ends.

Like many others, I find Schon’s arguments persuasive. Those who define ends for teachers might think differently if they were actually confronted with the complex realities of teaching. They might modify their ends. They might begin to appreciate how challenges in specific teaching contexts raise problems in principle for any attempt to determine ends from above.

However this paper makes no appeal to Schon. It assumes for the sake of argument that it is both possible and legitimate for government to determine the ends of education.

ARE WE JUSTIFIED IN A GENERAL RESISTANCE TO PRESCRIPTION?

If teachers are required to teach according to specified methods, this may be thought to cast them in the role of ‘mere’ technicians. It is common to object to such education policies on just these grounds. Teachers are deemed to be undermined as ‘professionals’. In Davis, 1998, I commented that teachers could not be held to account for pupil learning outcomes if they were using ‘teacher-proof’ methods enforced by others. (Pendlebury, 1995, makes a similar point.) This provides a prima facie objection to treating teachers in this way. It appears to undermine the desire by the state to hold teachers and their schools responsible for the learning achieved by their pupils. Moreover the thrust of school inspections is that teachers’ choices can make a difference to the learning of their pupils. Teachers are instructed that their choices may be wise, or less wise, and that they are to be held accountable for the quality of pupil learning which results. However, I later show that some types of prescription avoid the ‘technician’ criticism.
Another argument against method imposition is that despite claims by government agencies the available evidence simply does not justify their confidence in the recipes. Often the methodology is imposed without being thoroughly trialled. Proper scrutiny of such an argument could be carried out by empirical researchers working within the broad discipline of the social sciences. Philosophy per se has nothing to contribute here directly. An even more radical objection is that it is not possible in principle to demonstrate empirically that a particular method of, for instance, teaching mathematics is causally implicated in ‘raising standards’. This scepticism might be grounded in a global pessimism to the effect that a ‘scientific’ approach cannot in principle establish causal laws between events involved in human actions, human thinking and human learning.

While I am sympathetic to this view, its truth is not assumed in this paper. I believe that there are analytical objections that apply in a particular fashion to some types of putative teaching methods. These objections take the form of a dilemma. This is summarised below. The relevant argument is then developed in some depth.

SOME PUTATIVE TEACHING METHODS LACK IDENTITY: THE ARGUMENT

Some of the so-called teaching methods can only possess robust identity criteria if teachers set aside their own understanding of why they are using a particular approach. Yet such behaviour by teachers is not only psychologically impossible in many cases, but in a more fundamental way would undermine the very coherence of the act of teaching. On the other hand, if teachers continue to exercise a degree of choice about what they do in their classrooms in the light of their intentions to bring about learning their ‘methods’ lack proper identity criteria. A ‘method’ which lacks identity is necessarily not the sort of item for which we can gather evidence.

The first move in elaborating this argument is to examine the kinds of action properties that might be embodied in prescriptions of teaching methods. In an extreme version of prescription the properties specified might be physical. Teachers could be required to take two paces forward before beginning to speak, to inflect their voices in a particular fashion, to shout or not to shout. They could be asked to utter specific words or sentences in a particular manner. Standard explanations of forces, or of our conventions for full-stops, might be provided by the Teacher Training Agency, and teachers told that they must employ these explanations word for word. Teachers might be instructed to use a specific procedure for calling the register or for dealing with an epileptic or asthma attack. They might be expected to read their own book silently while the children read theirs. They could be asked to arrange children in a ‘horseshoe’ shape facing the OHP, to give the children rulers of a particular kind or to equip the classroom with chairs and tables of a certain design and manufacture.
There are relatively few actual instances of prescription invoking precise physical descriptions of teaching actions. However, there is a desire in the UK at least for teacher-proof methodologies and materials, stemming perhaps from a deep pessimism about the competence of teachers. It is felt that the methodologies must be effective with the merely ‘good-enough’ teacher. Behavioural specification could in theory be held to be one way of by-passing the mind, thought and professional talent of teachers whose powers have not over-impressed the authorities.

Contemporary prescriptions are much more likely to mention potential teacher actions by referring to action properties that are not merely physical. Now a claim that a teacher’s actions possess one or more of these properties would be a matter of interpretation. It is often urged that there is no such thing as simple observation or ‘seeing’. We are always ‘seeing as’; we interpret what we see to make even minimal sense of it. Granting this familiar point, we may still distinguish broadly between a literal replication of a teacher’s bodily movements in the classroom and a richer type of emulation which involves interpreting teaching purposes. In the latter case there may be an accompanying narrative that involves typing the observed teaching actions according to their consequences in terms of pupil learning or in terms of significant systems of concepts used in prevailing educational discourses. Presumably it is intended for instance that teachers observing the lessons of literacy or numeracy consultants should acquire teaching recipes from the consultants as a result of a rich and complex interpretation of the consultant’s teaching actions. Teachers are not supposed simply to imitate the consultant’s physical behaviour.

In the Literacy Hour (DfEE, 1998) teachers are told to focus clearly on literacy instruction, the essence of which is said to be direct teaching to clear objectives. This strategy is broken down into a variety of ‘aspects’ which include:

- ‘direction’ e.g. to ensure pupils know what they should be doing, to draw attention to points, to develop key strategies in reading and writing;
- demonstration; e.g. to show or model processes e.g. how to form and join letters, how to read punctuation using a shared text; how to use a dictionary;
- explanation to clarify and discuss: e.g. reasons in relation to the events in a story, the need for grammatical agreement when proof-reading, the way that different kinds of writing are used to serve different purposes;
- questioning: to probe pupils’ understanding, to cause them to reflect on and refine their work, and to extend their ideas;
- initiating and guiding exploration: e.g. to develop phonological awareness in the early stages.

The corresponding guidance for the Numeracy Hour says: ‘There should be a focus on direct teaching to clear objectives throughout your
numeracy lesson’. We are told that ‘high quality direct teaching is oral and interactive’. It involves:

- Instructing: giving information and structuring it well: for example, describing how to multiply a three-digit number by a two-digit number, how to interpret a graph . . .
- Demonstrating . . . for example, showing how to scribe numerals, showing how to measure using a metre stick or protractor, demonstrating on a number line how to add on by bridging through 10, using a thermometer to demonstrate the use of negative numbers.
- Explaining and illustrating: giving accurate, well-paced explanations, and referring to previous work or methods: for example, explaining a method of calculation and discussing why it works, giving the meaning of a mathematical term, explaining the steps in the solution of a problem . . .
- Questioning and discussing: questioning in ways which match the direction and pace of the lesson and ensure that all pupils take part . . . listening carefully to pupils’ responses and responding constructively in order to take forward their learning, using open and closed questions, skilfully framed, adjusted and targeted to make sure that pupils of all abilities are involved and contribute to discussions, allowing pupils time to think through answers before inviting a response . . . (DfEE, 1999, pp. 11–12)

These exhortations manifest a fascinating range of action properties. We need to examine these characterisations, and compare and contrast them with properties that might be ascribed to a mundane physical action. For instance, in ‘Jones threw the stone’ we have an action description that concentrates largely on observable physical properties of the event. Consider also ‘Jones broke the window’, which is another description that might be applied to one and the same action.¹ Now this characterisation takes account of features of the world that are in some sense ‘distinct’ from Jones’s action identified by properties related to his body. One criterion for distinctness might be that Jones could have performed the ‘same’ action, but the window need not have broken (had the wind been in a slightly different direction, thus altering the stone’s trajectory etc.). That is to say, his action could have had a number of the same properties, for instance those relating to what he did with his body, even had it lacked the property of being a breaking of the window.

Are there parallels between the stone-throwing and, for instance, ‘Explaining a method of calculation’? The latter description of the teacher’s action apparently incorporates the consequences for the pupils. The pupils come to understand the calculation method, and would not have done so had the teacher failed to perform whatever actions were deemed to be ‘explaining’. So ‘coming to understand’ within the act of ‘explaining’ corresponds to the breaking of the window within the act of ‘stone-throwing’.

The teacher’s performance could in principle have possessed many of the same properties without the consequent pupil learning. Various explanations for the learning failure might be envisaged. Here are just two possibilities. In the first, the pupils are distracted in a way that the teacher could not have anticipated by events on a nearby building site. In the second, the teacher, who is new, has been misinformed about previous work the children have done on the calculation method in question. Such possible explanations for pupil learning failure have a corresponding element in the above stone-throwing narrative. This is the explanation that the stone might fail to break the window if the wind were blowing in a different direction even if other properties of Jones’s action remained the same.

It is unlikely that even the most brilliant (and lucky) teacher will bring about appropriate understanding improvements in all the pupils as a result of her actions in any one lesson. Even if she does, it will be always difficult to tell that this is so, at least in the short term. These are obvious facts, of which those trying to lay down methods are presumably well aware. What, then, do the methods authorities mean by ‘explain’? Have they decided in advance that teaching acts with certain properties are to count as explaining, regardless of the actual results in any particular lesson? Suppose that this does represent their usage of ‘explain’. Part of the context for this usage would be their belief that in the majority of cases deemed to be instances of explaining learning will occur. They would hold that there is evidence that actions with certain properties (which they can possess whether or not tokens of them when performed actually bring about learning improvements in particular teaching contexts) will for the most part cause relevant learning improvements.

This is arguably a plausible reading of their approach to the meaning of ‘explaining’. After all, the recommended methods will normally be used in situations where large groups are being taught. Here individual learning improvements cannot readily be pinpointed however skilful the teacher may be at assessment.

We need to pause for a moment to note the way the argument turns on this crucial point. Claims to assess precise learning outcomes on the basis of evidence gathered over short periods of time are deeply problematic. This consideration is particularly powerful if the learning being sought is ‘rich’, that is to say, appropriately connected in the learner’s mind with prior knowledge, and also usable and applicable in a good range of contexts. (See Davis, 1998, for a fuller treatment of ‘rich’ knowledge.)

For instance, consider the ‘know how’ in the exhortation that teachers should describe to pupils ‘how to multiply a three digit number by a two digit number’. On a ‘rich’ interpretation successful teacher instruction should involve pupils in understanding multiplication and how it relates to other arithmetical operations, a grasp of place value and a flexibility of approach to multiplying three digit by two digit numbers which incorporates a range of methods, depending on the numbers. Sometimes recourse might be had to mental methods involving rounding up or
down and then compensating. Distinctive strategies would be selected intelligently to suit particular calculations. For instance, multiplying 300 by 24 would not be carried out by using a long-multiplication method. It might instead be addressed by multiplying 24 by 3 and then moving the resultant digits two columns to the left in the place value system. ‘Moving the digits’ appropriately would reflect a good understanding of the base ten place value system. In contrast, multiplying 356 by 72 might be done by the traditional written algorithm referred to as long multiplication. Any of these methods should be preceded by an estimation of the likely size of the answer. Such estimation will call upon capacities to round numbers up or down, and a grasp of place value. That pupils have achieved this type of rich learning is not detectable in any simple or short term fashion, and it may be argued that there are problems in principle about detecting it at all (Davis, 1998).

Let us return to the main discussion. Is it possible that the authorities wish certain methods to be used, regardless of whether individual pupils are learning on any particular occasion? If so, it would follow that teachers should use the methods in question whether or not they think that their pupils are learning at any given time. This approach would fit nicely with the very detailed programme laid down in the National Numeracy Project for example. Each week certain content has to be ‘covered’, and there is only modest scope for the teacher’s diagnosis of her pupils’ progress to make a significant short-term difference to the sequence of the programme or the pace at which it is delivered.

It is a very important issue. If a method of ‘explaining’ is being prescribed which does not incorporate the actual changes in the pupils then the teacher cannot be held directly responsible for whether the children learn. She can only be held indirectly responsible, in the sense that she can be called to account for whether she has used the officially approved method, namely the method which is believed by the authorities to bring about more learning than alternative approaches.

Note another problem for the ‘non-consequential’ reading of ‘explaining’. *Which action properties are being prescribed?* Perhaps the teacher will be speaking in every case. But what other properties must her speech acts have? It is difficult to imagine what response the methods authorities can make. In theory they could offer the actual form of words to be used. However this looks very rigid and implausible.

On the other hand, ‘explaining’ might be intended to characterise teacher actions in terms that incorporate the pupil learning they cause. This sense of ‘explaining’ permits the teacher to be held directly responsible for the quality of this learning. However, for such accountability to be logically coherent, significant latitude about the other properties of the teacher’s actions is essential. That is to say, the teacher must be able to exercise choice in how she achieves her explanation.

The teacher is bound to attend to the responses from the pupils as she engages in the teaching process. She will be seeking to gauge whether she is making sense to them and whether they are beginning to understand.
As models, analogies and forms of words seem to evoke puzzlement or bewilderment she will rapidly and subtly shift her strategies, trying other approaches until expressions of dawning comprehension reward her efforts. Yet this will also be insufficient. Children often fail to ‘understand’ when they think they do understand. She will have to ask questions and listen carefully to the answers even as she tries to explain. The responses will inform her next move. They could help to establish the ultimate end state of improved understanding.

Evidently ten teachers given this kind of responsibility to bring about learning, with ten distinct groups of children, could teach ten different lessons. Teachers will naturally vary in their personal styles, and in the ways in which they provoke responses from pupils. It would seem strange to describe what they are all doing as in any sense a ‘method that works’. What is supposed to be common to all ten? Remember that the actions may only appear to have something common to all of them because of their consequences in terms of pupil learning outcomes. They need share no other feature whatever. We have lost any kind of handle on what the method is supposed to be.

Indeed, could such a ‘method’ possibly be the focus of observation by a group of teachers watching the numeracy or literacy consultant giving a demonstration lesson? What would the expert be demonstrating? They might be demonstrating that they can bring about learning improvement. (Yet younger children in particular may well not learn significantly over a time span as brief as a single lesson, even if that lesson has in some sense been ‘effective’.) How are the teachers who are observing supposed to be helped? They may be inspired, encouraged, and eager to see whether any of the expert’s methods can be adapted for use in different contexts. If things went no further some good might result, and little harm would be done. However, teachers anxious to please the authorities might be seduced into a kind of copying which would be gravely damaging to their own practice. They may think they are expected to engage in some literal-minded and superficial imitations of the expert’s mode of speech, body language or organisation. The approaches in question could well be appropriate for the expert’s class and the particular personality of the demonstrating teacher but may have no hope of ‘transferring’ to other teachers and classroom contexts.

The argument so far has concentrated on the example of ‘explaining’, but ‘explaining’ is not a special case. Many of the key directions in the literacy and numeracy strategies involve action properties that raise similar conceptual issues. For instance, ‘demonstrate’ could simply cover something that the teacher does regardless of the pupil response, or it might build in the idea that the demonstration actually works. Again, ‘initiating and guiding exploration’, ‘showing how to measure’ and ‘giving pupils an insight into the next stage of their learning’ all raise the issue of the resulting pupil learning outcomes. Indeed in the last instance mentioned this is wholly explicit.

Some may wonder why I have chosen examples from the literacy and numeracy strategy which on the face of it seem perfectly reasonable.
Surely we do want teachers to explain things well, to clarify issues, to engage in effective questioning and in the other processes mentioned in the guidance for teachers. Why waste logical powder on these when lurking over the hill are agencies or pressure groups with far less acceptable impositions in mind?

My response is this. It seems important to use actual examples to avoid the accusation of inventing straw men. It is crucial that the emptiness in these prescriptions is thoroughly exposed. For what may happen in practice is that their blandness and vacuity will permit them to be ‘interpreted’ by literacy and numeracy consultants, their local authority managers, OFSTED or the Teacher Training Agency. Particular kinds of behaviour exhibited by ‘leading teachers’ will be said to be what is ‘really meant’ by the generalised injunctions of the National Literacy and Numeracy strategies. Before they know where they are, teachers may find themselves beguiled into following patterns of teacher behaviour that are not known to ‘bring about’ learning in general, and which may prove most unhelpful in the idiosyncratic contexts of their own classrooms.

Besides, one of the objectives of this paper is to offer a general analysis of the differences between acceptable and unacceptable prescriptions of teaching methods. Although there are particular attempts to regiment the behaviour of teachers in England that seem ill-advised, I hope the fruits of this discussion are not applicable only to my own country. Educationists need conceptual spectacles with which to examine any attempts to prescribe teaching methods in any contexts.

AN ATTEMPT TO DEFEND THE METHODS UNDER ATTACK

It might be held by those who wish to impose ‘effective teaching methods’ that my whole approach represents a thoroughly objectionable story about teaching processes. This story is only possible, the objection might continue, because of a kind of obscurantism about the possibility and detection of learning outcomes. Our methods evangelists might circumvent this by further prescribing what is to count as the learning outcome. ‘Knowing how to multiply a three digit number by a two digit number’ could be provided with an official definition. A particular algorithm or calculation method might be laid down. If this were achieved it should be relatively straightforward to determine whether pupils have mastered the particular rules or procedures that comprise ‘knowing how to multiply a three digit number by a two digit number’. The detection process could be made even easier by ordaining what would count as the pupil demonstrating knowledge of such a procedure. Success on a specific test could be made standard. I will refer to this process as a narrow proceduralisation of learning.

Once this tough-minded discourse about what is to count as learning is put in place, my opponent might conclude, the complex teacher–pupil interactions I have hitherto portrayed as essential can actually fall out of the picture. Teachers can be given specific recipes (which might as well
be referred to as training methods). These could define teaching actions they are to perform with clearly identifiable properties. Such properties of teaching actions would have to be known to elicit from pupils a rapid mastery of the narrowly proceduralised learning outcomes. Such mastery is straightforwardly detectable, so recipe verbs such as ‘explain’ can be thought of as involving their consequences in terms of pupil learning outcomes. Teachers can be held responsible both for performing actions with the ‘right’ properties and for the learning outcomes of their pupils. The recommended methods could have all the identity criteria that could be desired.

I would contend that the ‘tough-minded discourse’ as outlined here has many fundamental flaws. Do those who prescribe teaching methods really want the literacy and numeracy hours to become training sessions in which pupils are taught specific procedures that they regurgitate in standard tests? Arguably this should certainly not be their goal if they see education as preparing pupils for participation in a competitive industrial economy (see Davis, 1998). Knowledge comprising procedure mastery in a narrow range of contexts is unhelpful for employees. They need to be able to use and apply their knowledge in a variety of situations, and with a kind of intelligent flexibility. While more able pupils on reaching adulthood often proceed to make flexible use of knowledge initially acquired as ‘thin procedures’, the majority will not. This is an empirical rather than a philosophical claim, but I know of no evidence to the contrary, and the mass of professional experience favours my claim. It may also be argued that teaching for thin procedures damages pupils’ conceptions of learning during their schooling. (Again see Davis, 1998, passim.)

Nevertheless, the repeated use of the phrase ‘clear objectives’ suggests that those seeking to lay down methods for the teaching of literacy and numeracy attach special importance to it. What counts as a ‘clear objective’? One well-worn way in which objectives can be ‘made clear’ is of course to specify what counts as the possession of the relevant learning. This is most easily achieved if the conception of the learning concerned is as thin and as narrowly procedural as possible.

FURTHER OBJECTIONS TO PRESCRIPTION

Some of the examples mentioned above escape the dilemma I have just elaborated. As described, they encompass clear identity conditions without becoming absurdly and rigidly behavioural. There is no question of learning consequences being built into the action characterisations, even indirectly. For instance, arranging the children into a ‘horseshoe’ shape around an OHP, teaching one subject at a time rather than integrating subject teaching, using specific equipment, reading a book silently while the children read their own books, ‘streaming’ children by attainment and several others seem to be favoured candidates.
It would be quite a challenge to gather evidence for the efficacy of these ‘methods’. So much else might vary in complex ways. Many of these variations would be difficult to pin down and measure. Consider the case of arranging pupils in a horseshoe shape around an OHP. In theory empirical research could compare such classrooms with others offering different arrangements. The point would be to measure the effect of the horseshoe arrangement on learning outcomes. To do this it would be important to ensure that there were no other features peculiar to the OHP cases. For instance, it might turn out quite independently that teachers keen to work in this fashion happen to be particularly effective in the way they prepare children for the tests that ‘measure’ learning outcomes. To eliminate such possible influences on the results the classrooms using horseshoe arrangements and those in the control groups would need to vary in as many other respects as possible. A comprehensive identification of all the variables that might be important in an exercise of this kind would be very hard to achieve.

Might a government agency with sufficient pessimism about the competence of the average teacher insist that certain methods should be followed? Might their pressure be sustained regardless of exceptions whose advisability would be obvious to many teachers in the thick of the teaching situation? The teacher decision-making sought might resemble that followed by rule utilitarians. A rule utilitarian may decide to perform an action of a certain kind, even when judging that in the case in question the specific action concerned will not maximise happiness and/or minimise pain. This is because she believes that acting in this way is following a rule which when globally adhered to will maximise happiness. Agencies prescribing teaching methods might claim that there was evidence that the implementation of the method ‘worked’ overall, and that they intended to by-pass teacher’s professional reservations in particular cases.

Some may recall R. M. Hare’s position about moral thinking, in which he distinguished between the perspectives of the ‘archangel’ and the ‘prole’. He held that there were two levels of moral thinking. The first level is ‘intuitive’. At this level, certain general principles about what makes an action right or wrong are embraced quite naturally and unthinkingly by those who have been sensibly brought up. The principles help us deal at a practical everyday level with fresh situations. There are always some similarities between the new and old, and the principles help us to make decisions. The ‘prole’ obtains these principles from other people by education or imitation. However, since such principles are bound at times to conflict, a second level of thinking is also needed, in which we think like archangels. We use ‘critical’ moral thinking to rise above the level of general intuitive principles, to take in the complexities of a particular situation and to formulate a highly specific principle that is appropriate to that situation.

The merely ‘good enough’ teacher would be being asked by government agencies to keep her thinking at the level of the ‘prole’. The role of the ‘archangel’ would be reserved for the devisors of the
methods that work. Of course, the attempt to draw an analogy between the prole/archangel picture of two levels of moral thinking, and two levels of thinking about teaching, breaks down. The nature of the breakdown is highly instructive. All of us must, from time to time, rise to the level of archangels to deal satisfactorily with situations that involve conflicting principles. Yet teachers would be being told that they must not rise to the archangelic level. I suggest that remaining at the proletarian level would be particularly destructive of the integrity of the teaching process. It would involve among other things a refusal to take proper account of the apparent responses of pupils in the course of a teaching episode. For without such a refusal teachers become embroiled in significant modifications of the ‘methods that work’.

To sum up, it is very difficult to see how teachers can act intelligently or even coherently within the complex and to a degree unpredictable range of classroom contexts they encounter unless they understand the purposes of any methods handed down to them, and unless they are free to pursue these purposes at times by deviating from the method as literally understood. Teacher-proof methods cannot actually ‘work’.

ARE THERE VIRTUOUS RECIPES FOR TEACHING?

Some will favour flexible recommendations for teaching which appear to take account of teacher ‘professionalism’. These recommendations allow for teacher autonomy and for teachers’ capacities to make sophisticated and informed decisions in particular contexts. If my attack on government-sponsored methods is too comprehensive, some may argue, I am ruling out all kinds of useful and even inspiring guidance from which teachers and pupils could profit. These include higher level and more flexible injunctions than those discussed earlier. For instance, teachers have been encouraged to use ‘open’ questions rather than closed questions. Similarly they have been advised to set problems or investigations to which there are a number of answers, rather than questions to which there is only one right answer.

Let us consider the first example. To suggest that this is a ‘method that works’ in anything like the sense discussed earlier would be bizarre. Suppose we had ‘evidence’ that this approach was particularly effective in promoting a rich, flexible kind of understanding, rather than a thin proceduralised knowledge. Imagine further that we agreed that this was the kind of learning that schools should be trying to promote. Yet teachers might often have excellent reasons for choosing to use closed questions at particular times. For instance they may feel that when they are getting to know a class certain children would have their confidence boosted if given the opportunity to answer a range of closed questions. At a later stage the pupils will be able to deal with more open questions that require them to think. They may be happier then to volunteer possible solutions to more complex challenges even when they know their contribution might be wrong.
So teachers should interpret the exhortation to use ‘open questions’ not as a ‘method that works’, but as a guiding principle which they employ intelligently and flexibly with other principles to make decisions in particular classroom contexts. I have little quarrel in general terms with these higher order recommendations for approaches to teaching. They differ markedly from some of the recipes I was attacking earlier, and do not seem designed to be ‘teacher-proof’.

Let us briefly consider another example about which we could be more positive. Crockroft’s famous paragraph 243 (1982) said:

Mathematics teaching at all levels should include opportunities for exposition by the teacher; discussion between teacher and pupils and between pupils themselves; appropriate practical work; consolidation and practice of fundamental skills and routines; problem-solving, including the application of mathematics to everyday situations; investigational work.

Again, does this represent a more virtuous recipe for practice, produced in happier days when respect for teachers had not sunk so low? It looks much more acceptable than some of the literacy or numeracy demands quoted earlier, simply because it is more flexible, and leaves room for teacher decision. Yet Crockroft can scarcely have had ‘evidence’ that these ‘methods’ would lead to an improvement in mathematics learning. ‘Exposition’ or ‘problem solving’ for instance cover a huge range of possible teaching and learning styles. Rather than ‘methods that work’ we could have morally or educationally defensible principles. Justifications for these principles would not appeal to empirical evidence. They would rely instead on the reasoning peculiar to ethics, politics and educational philosophy.

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NOTES
1. On an austere theory of action identity such as that espoused by Davidson (1980). For convenience I discuss actions assuming that Davidson is at least roughly correct. However, a similar argument to that developed in this paper could be offered in terms deriving from ‘prolific’ theories due originally to Goldman (1970).
2. My thanks to Shirley Pendlebury for raising this question during a discussion of a version of this paper given at the 1999 Oxford Conference of the Philosophy of Education Society of Great Britain.

REFERENCES
