# Everything you were afraid to ask about communication skills

Iohn R Skelton

### **ABSTRACT**

'Communication skills' is now very well established in medical education as an area that needs to be taught at both undergraduate and postgraduate level. But it is a discipline with a low level of challenge — it allows itself constantly to take seriously questions about its fundamentals (such as whether it works at all) although common sense and everyday experience tell us that skills are indeed improved through training and practice. This slows progress. Much research has also concentrated on listing and defining a set of skills, yet although all doctors must understand and utilise a range of skills as a precondition for good communication, the findings themselves are often equally common-sensical, and are not, in any case, restricted to medicine. They often tend to form part of a general consensus in favour of lay-centredness, which has been studied in other types of professional encounter, particularly the language of teachers and pupils. Moreover, insofar as teachers of medical communication limit their aims and their own classroom language to terms associated with skills, they offer little scope for more important questions about how these skills should be deployed, and about the attitudes to medicine and professional life that underpin them. A central educational question is: should we concentrate on teaching skills in the belief that attitudes will follow, or attitudes in the belief that they will generate appropriate skills?

### Keywords

attitudes; communication; education.

### WHY DO WE RESEARCH THE OBVIOUS?

The Toronto consensus statement¹ is probably the best-known of all documents on communication skills in medicine. Published in 1991 under the names of an impressive number of luminaries in the field, it acted — and was designed to act — as a clarion call to workers in the field, and to doctors generally, about the importance of communication:

JR Skelton, BA, MA, RSA, MRCGP, professor of clinical communication, Department of General Practice, Medical School, University of Birmingham, Birmingham.

### Address for correspondence

John R Skelton, Professor of Clinical Communication, Department of General Practice, Medical School, University of Birmingham, Birmingham B15 2TT. E-mail: J.Skelton@bham.ac.uk

**Submitted:** 20 January 2004; **Editor's response:** 17 March 2004; **final acceptance:** 24 May 2004.

©British Journal of General Practice 2005; **55:** 40–46.

'Effective communication between doctor and patient is a central clinical function ... the physician's interpersonal skills ... largely determine the patient's satisfaction and compliance and positively influence health outcomes ... Studies in many countries have confirmed that serious communication problems are common ...'.

The other central sentiment evidenced here is that, not only do communication skills matter, they can be 'defined with behavioural criteria and reliably taught and assessed', and are therefore the province of the medical educator. This is a view that is echoed elsewhere:

'... there is overwhelming proof that communication skills in the patient–doctor relationship can be taught and are learnt ... Another finding is that these skills are easily forgotten if not maintained by practice'.<sup>2</sup>

Not only that, it appears we know what skills to teach: Silverman et al, for example, stated that, 'there is now comprehensive theoretical and research evidence to guide the choice of communication skills to include in the communication curriculum'.<sup>3</sup> But wait — under what other circumstances would we expect teaching not to work? Substitute 'playing the violin' or 'speaking French', 'winning at chess', 'interpreting fossil finds' — or anything you want — into Aspegren's claim<sup>2</sup> and it looks absurd. If your child's music teacher claimed to have 'theoretical and research evidence' about what skills to teach, you might merely question their competence: but to come out with a phrase such as: 'there is evidence that learning the violin improves violin skills', is to invite queries about one's health.

And this takes us immediately to the first great unasked question about communication in medicine: why do we still need to demonstrate and state the self-evident, that, for example, 'interpersonal skills, like other skills, benefit from reinforcement''? This, for example:

'Communications curricula using an established educational model significantly improved thirdyear students' overall communications competence as well as their skills in relationship building, organisation and time management, patient assessment, and negotiation and shared decision making'.<sup>4</sup>

Well yes, it would, wouldn't it? If that was what it was designed to do, and if it was done well, then it would work. But notice that the relevant issues, such as the quality of the methodology and the delivery, are not, apparently, the point — although, as it happens, they are described in passing in the text, and seem sensible enough. Rather, the issue is perceived to be the generic principle: if you teach communication, however defined, people learn to communicate.

The opportunity costs of researching the crashingly obvious in this way are considerable. For whom do we do it? A singularly obtuse dean, say, who refuses to countenance money spent on fripperies? (But deans send their children to school). It says little to our credit if we still feel the basic case needs to be made, and even less if we do not yet wilfully allow the research agenda to be subverted.

### WHY ARE WE SO DEFENSIVE?

There is, I think, a kind of defensiveness at stake here. Many people think of communication as something that comes naturally or not at all. Possibly, this happens because such people cannot imagine how one might set about teaching it. Possibly, it has more to do with the status of communication as something, frankly, rather anodyne; at worst, as a version of simple niceness. A recent report on the BBC's website, for instance, reported that:

'NHS staff are to receive lessons on how to be nice to patients, under plans drawn up by the Department of Health ... A training programme to improve the communication skills of newly-qualified doctors and nurses is to be established later this year ... The programme, which will be run by psychologists, will aim to ensure staff are more sensitive to patients and avoid making gaffes or outbursts'.<sup>5</sup>

And, of course, niceness is easily presented as a content-free irrelevance. The author here is having a swing at problem-based learning; communication skills are simply in the line of fire:

'In defending [problem-based learning], a spokesman for the General Medical Council's Education Committee said that it had to be recognised that communication skills are as important as anatomy. But what good are doctors who empathise, smile and maintain eyecontact if they do not know their stuff? How

### How this fits in

It is known that good communication is a desirable feature of the medical encounter, and that characteristics often associated with good communication can be taught. This paper suggests that what is already known should now be beyond debate, and that there is a need for educators and researchers to look at issues other than the delivery of skills-based curricula.

much better to have a brusque expert who can prescribe the right course of action'.6

This vision of what communication is about has done severe damage to the field: not only, I imagine, in lowering the self-esteem of teachers, but in making it possible not to consider the intellectually and emotionally tough areas of the discipline. Understanding the nature of simplicity, say; being precise; structuring an interaction' telling the truth. To be all quivering antenna and no brain, all emotion and no moral fibre, is to do a disservice to the patient and to the discipline. This is obvious enough.

Perhaps the defensiveness has to do with a kind of anxiety experienced by academics across the board, in inverse proportion to how empirical they feel their discipline to be. Communication Studies has, in one sense, an exceptionally honourable and venerable tradition that can be traced back to the Greek and Roman study of rhetoric, to the place of rhetoric in the medieval university, and to the interest in the art and science of speaking as a legitimate university concern in the early years of the last century. And, in polite medical society, we acknowledge the centrality of communication: 'the doctor who lacks [communication skills] can be said to be lacking in technique, in the same way as the doctor who lacks clinical knowledge', stated the British Medical Association.7 But it makes no difference; this is a discipline with an inbuilt sense of cringe.

## IS COMMUNICATION AN ART OR A CRAFT?

All research disciplines have what is known as a 'level of challenge': to investigate the effects of climate change on crops does not, these days, require us to prove that the earth circumnavigates the sun; the circulation of the blood is beyond challenge when we discuss the management of patients with coronary heart disease, and so on. The debilitating truth is that the level of challenge for communication is very, very low.

The main difficulty is perhaps to do with notions of what it is to be a science. Medical communication exists, for better or worse, in a discipline that is straightforwardly scientific. And scientific research works in essence by the determination that particular causes lead to particular effects, following well-established criteria, such as Koch's postulates,<sup>9</sup> or well-established conventions, such as that of statistical significance. Indeed, this is how science has been since the scientific revolution: 'Science', said Thomas Hobbes (writing in 1651), 'is the knowledge of consequences, and the dependence of facts upon one another'.<sup>10</sup> To which one might add, as far as medicine is concerned: do these findings have clinical utility?

Cause and effect, however, do not have the same intimate relationship when it comes to language and communication. Jonathan Miller, himself a doctor and skilled communicator, of course, was asked on air many years ago if he felt literature had a civilising influence. Yes, he said: but that didn't mean you could quell a riot by reciting Wordsworth's *Daffodils* through a megaphone. Yet the experimental basis of a substantial amount of work in the field is not unlike this.

Many of the difficulties here can be traced back to the general psychological tradition, and the way that, for example, purist forms of behaviourism, in seeking the inexorable links between stimulus and response — cause and effect — sought also to establish the credibility of psychology itself as an empirical science. It dealt, as sciences do, with the perceptible: the manifest behaviour of the organism.

And as far as medical communication is concerned, what this all boiled down to was — and often still is, as the Toronto consensus statement reminds us — the study of how bits of behaviour, labelled as process skills, affected such matters as patient compliance, satisfaction and, beyond that, the health of the patient.¹ This tradition springs largely from the elegant work of Ley,¹¹ dating from the 1960s onwards, and it is a tradition that is still with us today.

This brings us to the status of these skills themselves, and to a sense of disquiet. Ong *et al* offer a counterbalance to the bullish certainties of the Toronto consensus statement:

'In the past two decades descriptive research has tried to shed light on the communication process during medical consultations. However the insight gained from these efforts is limited ... This is probably due to the fact that among interpersonal relationships, the doctor–patient relation is one of the most complex ones'.<sup>12</sup>

The idea that the doctor-patient relationship is somehow more complex than others is problematical: it's not at all clear what complexity

might mean here and, interestingly, despite the thoroughness of the review, the major qualitative studies of the 1980s<sup>13,14</sup> are not mentioned in the text

Nevertheless, the fact is that attempts to find correlations between cause and effect have tended to yield rather banal results. The real problem is the variable preferences of individual patients<sup>15</sup> — and doctors too for that matter. Take a single example: eye contact is often cited in the literature as a good thing, yet we know that the frequency of eye contact and (if we can be allowed an unscientific term) the type of eye contact will vary depending on such things as the age, sex, and cultural backgrounds of the participants. In consequence, the literature of assessment schedules for communication skills is full of words like 'appropriate', 'properly' and the like ('appropriate' makes seven appearances in the schedule for the Member of the Royal College of General Practitioners' video exam16). This is entirely reasonable: but the goal of objective description, which the study of behaviour seems to promise, is lost in a mist of equivocating adjectives.

So it is that the great generalisations of communication skills often sound like simple common sense. Consider Maguire and Pitceathly's account, for instance, of key skills (and notice that 'reasonable' eye contact):

'Establish eye contact at the beginning of the consultation and maintain it at reasonable intervals to show interest. Encourage patients to be exact about the sequence in which their problems occurred; ask for dates of key events and about patients' perceptions and feelings ... Use "active listening" to clarify what patients are concerned about — that is, respond to cues about problems and distress by clarifying and exploring them. But avoid interrupting before patients have completed important statements'.17

... and so on. But between the probably high correlations of the banal and the low correlations of the particular, there are few helpful generalisations left.

In fact this brings us back to the issue of level of challenge by another route. A need to spend time and effort demonstrating that repetition aids recollection specifically in the medical consultation, just as our daily experience tells us it is likely to do in every other aspect of life, is a retreat into scepticism of Humean proportions. And, as happens with extreme scepticism, progress slows to glacial speeds: what has the evidence told us that we did not know 40 years ago?

## THE UNBEARABLE LIGHTNESS OF COMMUNICATION SKILLS: DO THEY MATTER?

There is a further step that in most people's minds is routine: the description of these skills as somehow the embodiment of patient-centredness. It is one of the conundrums at the heart of the communication skills endeavour, that most doctors report a desire by many patients to opt out of a patient-centred approach ('you know best, doctor'). The whole business of 'appropriacy', of course, makes this easy: where it is appropriate to be paternalistic (the patient desires it), then this too is patient-centred. But what follows from this, evidently, is that patient-centredness is not an objectively observable phenomenon: it varies from patient to patient and exists, therefore, not in a set of skills, but in the heart and mind of the patient.

It is very easy to overstate the case here, to point to the mechanistic nature of the skills inventories and appeal instead to a humanism that, after all, doctors would want to believe they were fostering. The fact of the matter is that many undergraduates, and not a few qualified doctors, do not know what the basic skills are, and for that reason do not perform them. On the other hand, many find the skills very easy once they are pointed out, and want to go further. At which juncture, the fact that skills are empty things needs to be brought out and developed (Hitler, if you like, had good communication skills).

The ancient rhetorical tradition understood this difficulty, and discussed it. Was rhetoric just a matter of learning a box of tricks, or did one's heart and mind have to follow the rhetorical pyrotechnics? Aristotle, inevitably, had the issue clear:

'It is not true ... that the personal goodness revealed by the speaker contributes nothing to his powers of persuasion; on the contrary, his character may almost be called the most effective means of persuasion he possesses'.'8

Quintilian, writing in the heyday of the Roman Empire, offered, as a definition of rhetoric, the phrase: 'the good man speaking well'.<sup>19</sup> It is a phrase worth remembering.

The risk is that we become captivated by a set of skills, and forget what they are for, and that, although we talk of other things ('empathy', usually) when we teach or reflect on our own performance, we are quickly rendered inarticulate because the only well developed vocabulary we have is skill based.

## LAY-CENTREDNESS AND THE LIBERAL WESTERN CONSENSUS (OR WHY DO GPs MAKE GOOD TEACHERS?)

Perhaps if we understood the extent to which these

skills were part of the general drive towards lay-centredness that characterised much of the debate about professional talk from the 1970s onwards, we would see things in a different perspective. This is not a perspective that should result in us abandoning the very idea of teaching skills inventories, but one that would help us to be more careful in claiming originality, and more careful in claims about how far a purely skills-based approach can take us.

Just as 'patient centred' has become a term rubbed smooth by too much use (so that it now seems to mean merely 'good'), so the term 'learner centred' in general education has suffered the same fate. And, just as we might seek to trace the roots of patient-centredness back to, for example, Osler or one of his contemporaries, so we can trace the concept of the learner-centred classroom back to the great American educator, John Dewey, or one of his. Dewey was speaking as early as 1915 about 'positioning the learner as the center of activity'.<sup>20</sup>

The kinds of processes that we now think of as enacting patient-centredness are very similar to those held to embody learner-centredness. An early inventory,<sup>21</sup> used in medical education<sup>22</sup> and in hundreds of other studies from the 1960s,<sup>23</sup> offers categories of interaction (Table 1). This grid, developed before the advent of recording equipment that would work well in the 'hurly-burly' of the classroom, was designed to be filled in by an observer, who would put a tick against the relevant activity every 3 seconds. (This is easy to do, incidentally, and the resulting patterns can be very insightful.) The grid, on the face of it, is purely descriptive, yet it is easy to see how it can be used to prescribe 'good' interaction.

The desirable qualities of successful interaction — a familiar list — are such things as silence from the teacher, valuing learner questions, and so on. These, said Flanders, facilitate a shift from 'drills' (that is,

Table 1. F	landers'	interaction	analysis	categories. <sup>21</sup>
------------	----------	-------------	----------	---------------------------

Teacher talk	Response	1. Accepts feeling	
		2. Praises or encourages	
		3. Accepts or uses ideas of pupils	
		4. Asks questions	
	Initiation	5. Lecturing	
		6. Giving directions	
		7. Criticising or justifying authority	
Pupil talk	Response	8. Pupil talk — response	
	Initiation	9. Pupil talk — initiation	
Silence		10. Silence or confusion	

rote repetition without thought) to 'creative enquiry'.21 Or (a very similar distinction), what is at stake here is the move away from a 'transmission model' of interaction, in which the expert informs the non-expert,24 to a model that recognises the psychological25 and social26 processes at work on the non-expert as interaction takes place, and new information is contextualised in what the learner already knows. As with patient-centredness, however, the dangers of mapping 'good practice' onto this kind of grid, rather than using descriptive results as a source of reflection, are increasingly clearly understood.27

At any rate, there are a couple of important insights here, or so I would argue. Detailed consideration of the concept of lay-centredness in fields other than medicine has been around for a very long time (Flanders' body of work dates from the 1960s,21 as does that of other pioneers such as Bellack<sup>28</sup>). Patient-centredness is not original; rather, it contributes to a kind of sociopolitical vision about the nature of interaction, a vision in which it is good to value other beliefs, even among the apparently inexpert, and in which authority gives way to democratisation. This has little to do with medicine, and much to do with, for example, the educational ideals of Rousseau<sup>29</sup> and, beyond him, of Socrates,30 who believed that the most ostensibly ignorant had knowledge that might be elicited by questioning. (The word 'education' itself has a moderately complex etymology but, as a certain type of schoolmaster used to say, derives from the Latin for 'to lead forth'.) The result is a Western, liberal consensus that can seem sometimes parochial and sometimes, given the pedigree and age of the tradition, profound. But to consider it as just a list of skills to teach to medics is to misunderstand it.

## Box 1. Recommendations from the Bristol Royal Infirmary Enquiry.<sup>32</sup>

### Broadening the notion of professional competence

Greater priority than at present should be given to non-clinical aspects of care in six key areas in the education, training, and continuing professional development of healthcare professionals:

- > skills in communicating with patients and with colleagues,
- education about the principles and organisation of the NHS, about how care is managed, and the skills required for management,
- ▶ the development of teamwork,
- shared learning across professional boundaries,
- > clinical audit and reflective practice, and
- leadership.

Nevertheless, it is because it is, in part, reducible to a list of skills that GPs, and many other doctors, naturally make rather good teachers. To use Bellack's phrase,<sup>28</sup> they already understand the 'game of teaching'.

## A PURPOSE FOR RESEARCH IN MEDICAL COMMUNICATION

As good learners we should reflect on what we do: as good teachers, we should contextualise what we teach. As learners, what we are concerned with is what the great Brazilian educator, Paulo Freire, called 'naming the world'.31 He was talking essentially about the use of education to empower children from poor backgrounds, the role of the educator in helping learners to develop ways of talking about and, therefore, understanding the world, and changing it. But this is an idea of general applicability. Certainly, there are times when the sight of a well-meaning trainer and registrar working together (for example, on a video of one of the latter's consultations) with no language to discuss what they have seen beyond the language of skills, can look disabling.

As teachers, we understand the need to bring communication into the mainstream, to ensure that when we teach it we are teaching people to integrate communication with other areas of medical practice. Communication needs to take its place alongside a range of other non-clinical areas, as part of what the Bristol Royal Infirmary Enquiry calls of 'broadening the notion professional competence'.32 The range of things suggested by this enquiry (Box 1) is instructive. This suggests ways in which those of us who get labelled as 'communication skills teachers' might think of developing and contextualising our developing our ambitions beyond the adumbration of the basic skills associated with the performance of lay-centredness, and looking at the broader context of the interactive and reflective issues associated with these non-clinical areas.

In this respect it seems clear that teachers who restrict themselves to 'communication skills' sell themselves and their students short. If communication is taught using role play, or reviewing videos (that is, if the focus of the lesson is analysis of, and reflection on, some piece of professional interaction), then the key underlying question ought to be: 'what is it to be a doctor?' Put in terms that are more conventionally educational: if the focus is exclusively on skills and not on what (very broadly) we think of as the attitudes that underpin them — on the 'talking well' rather than the 'good man' — then the endeavour is hollow.

In effect, just as good communication tends to be mistakenly associated with a kind of vacuous pleasantness, so poor communication tends to be used as a 'catch-all' label meaning, in effect, 'we're not really sure what's wrong'. Box 2 offers three examples of doctors — composites of real cases — referred to the Interactive Skills Unit at the University of Birmingham as being 'poor communicators'. Problems like these represent the range of issues with which the teacher of communication, equipped with a sophisticated understanding of the way interaction is, should engage.

### CONCLUSION

The profession has burdened itself with a low threshold of challenge, which is quite unnecessary and, in any event, poor tactics. To teach skills and only skills is too often to teach the banal, and always to teach restrictively — and it misunderstands the educational tradition. The purpose of communication training is what the purpose of training always is: to offer opportunities for reflection and deeper understanding by bringing into the light of language things we could not previously voice.

The purpose of research into medical communication ought not, therefore, to consist of yet more fatuous general demonstrations that teaching works, nor the pursuit of still tighter links between cause and effect. We ought, instead, to concentrate on different ways of looking, on the discovery and description of different things as a way of offering ourselves and our students new insights and new ways of articulating what it is they do.

One final thought: it seems clear to me that it is narrowminded to work purely with skills. All of this discussion, however, is a version of the deepest of all educational questions. On the one hand, there are the surface skills through which we perform communication and represent the person we seek to achieve; on the other, there are the attitudes we have to our profession and to our professional selves. For educators, the issue is, therefore, whether it makes better sense to concentrate on habituating people to particular skill-sets, on the grounds that good professional attitudes will follow, or to invite reflection about appropriate attitudes both as a task of inherent value and as a way of demonstrating the need for the skills. The great educational question, I would argue, is this: to what extent do you agree with Hamlet, who tries to persuade his mother not to sleep with her new husband, his uncle Claudius?

'Good night: but go not to mine uncle's bed; Assume a virtue, if you have it not.

### Box 2. Poorly performing doctors.

Dr A is a specialist registrar in her early 30s. She is described as clinically confident, but often aggressive and short-tempered. Nurses say she is a bit of a bully. Role-play training and discussion reveal her as passionately committed to her profession: a perfectionist, with an unremitting determination to do her best for patients (who never complain about her). Training should be designed to help her work with patience and compassion towards colleagues.

Dr B is a GP registrar, aged 40 years, who has recently left a career in hospital medicine. He was educated in India and is clinically competent, but his consulting style is strongly doctor-centred. His previous specialty was in a relatively non-discursive discipline, where he has been able to hide the fact that he still understands British life and culture somewhat poorly. Training reveals him to be an exceptionally pleasant individual, who needs to concentrate on the relationship between communication and culture.

Dr C is a specialist registrar, well-liked and highly capable, who finds it impossible to obtain a consultant post. Training reveals him to be modest and unassuming. He freely admits he is not 'one of the lads': his relationships with colleagues are courteous, but not friendly. He interviews very poorly. Training should concentrate on building a professional persona that is more effective, but with which he feels comfortable.

That monster, custom, who all sense doth eat, Of habits devil, is angel yet in this, That to the use of actions fair and good He likewise gives a frock or livery, That aptly is put on. Refrain to-night, And that shall lend a kind of easiness To the next abstinence: the next more easy; For use almost can change the stamp of nature ...' (Act 3, Scene 4).33

Can use change the stamp of nature? Or is it a desire to change that refashions habit?

### **Acknowledgements**

A version of this paper was presented as a Keynote Address to the Society of Academic Primary Care, Manchester, 2005.

### **REFERENCES**

- Simpson M, Buckman R, Stewart M, et al. Doctor-patient communication: the Toronto consensus statement. BMJ 1991; 303: 1385–1387.
- Aspegren K. Teaching and learning communication skills in medicine: a review with quality grading of articles. *Medical Teacher* 1999; 21(6): 563–570.
- 3. Silverman J, Kurtz S, Draper J. Skills for communicating with patients. Abingdon: Radcliffe Medical Press, 1998.
- Yedidia MJ, Gillespie CC, Kachur E, et al. Effect of communications training on medical student performance. JAMA 2003; 290(9): 1157–1165.
- Anonymous. Doctors to get lessons on being nice. BBC News Online. http://news.bbc.co.uk/1/low/health/1952712.stm. (accessed 19 Nov 2004).
- Smithers A. Medical training is heading for disaster. *Independent Education Supplement*, 19 Sep 2002. http://jobs.independent.co.uk/ careers/story.jsp?story=334552 (accessed 26 Nov 2004).
- British Medical Association. Communication skills and continuing professional development. London: British Medical Association, 1998.
- 8. Latour B, Woolgar S. Laboratory life: the construction of scientific

- facts. Princeton: Princeton University Press, 1986.
- Evans AS. Causation and disease: the Henle-Koch postulates revisited. Yale J Biol Med 1976; 49(2): 175–195.
- Hobbes T. Leviathan. Cambridge: Cambridge University Press, 1996. (First published 1651).
- 11. Ley P. Communicating with patients: improving communication, satisfaction and compliance. London: Chapman Hall, 1988.
- Ong LM, de Haes JC, Hoos AM, Lammes FB. Doctor–patient communication: a review of the literature. Soc Sci Med 1995; 40(7): 903–918.
- 13. Mishler E. The discourse of medicine: dialectics of medical interviews. Norwood: Ablex, 1984.
- West C. Routine complications: troubles with talk between doctors and patients. Bloomington: Indiana University Press, 1984.
- Stiles WB. Evaluating medical interview process components: Null correlations with outcomes may be misleading. *Med Care* 1989; 27(2): 212–220.
- Royal College of General Practitioners. http://www.rcgp.org.uk/ exam/videoworkbook2004/intro.asp (accessed 25 Nov 2004).
- 17. Maguire P, Pitceathly C. Key communication skills and how to acquire them. *BMJ* 2002; **325**: 697–700.
- 18. Aristotle. Rhetorica. Roberts WR (trans.). In: Ross WD (ed), *The works of Aristotle*. Oxford: Clarendon, 1924. (Written 350BCE).
- Quintilian. The education of the orator (Institutio oratoria). Russell DA (ed.) (trans.). Cambridge: Harvard University Press, 2001. (Written c90CE).
- Dewey J. The child and the curriculum (1902). In: Boydston JA (ed). The collected works of John Dewey, 1882–1953. Carbondale and Edwardsville: Southern Illinois University Press, 1969–1991. Middle works 2: 273–291.

- 21. Flanders NA. *Analysing teaching behaviour*. Reading, Mass: Addison-Wesley, 1970.
- Davis WK, Nairn R, Paine ME, et al. Effects of expert and nonexpert facilitators on the small-group process and on student performance. Acad Med 1992; 67(7): 470–474.
- 23. Wragg EC. An introduction to classroom observation. 2nd edn. London: Routledge, 1999.
- Cannella GS, Reiff JC. Individual constructivist teacher education: teachers as empowered learners. *Teacher Education Quarterly* 1994; 21(3): 27–38.
- 25. Piaget J. *The origins of intelligence in children*. New York: International Universities Press, 1952.
- Vygotsky LS. Mind in society. Cambridge: Cambridge University Press, 1978.
- 27. Christie F. Classroom discourse analysis: a functional perspective. London: Continuum, 2002.
- Bellack AA, Kliebard HM, Hyman RT, Smith FL. The language of the classroom. New York: Teachers College Press, 1966.
- 29. Rousseau JJ. *Emile.* Bloom A (trans.). London: Penguin, 1991. (Original work published 1762).
- Plato. Protagoras/Meno. Guthrie WKC (trans.). London: Penguin, 1956. (Meno written c385BCE).
- 31. Freire P. *Pedagogy of the oppressed*. Ramos MB (trans.). Harmondsworth: Penguin, 1972.
- Bristol Royal Infirmary Enquiry. Learning from Bristol. The report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984–1995. London: HMSO, 2001.
- Shakespeare W. Hamlet. In: Wells S, Taylor G eds. William Shakespeare: the collected works. Oxford: Clarendon, 1988. (Hamlet written c1600).