FORUM
Volume 61, Number 1, 2019
www.wwwords.co.uk/FORUM
http://dx.doi.org/10.15730/forum.2019.61.1.113

Knowing What to Do in School: what is it useful for educational leaders, teachers and students to think about?

JOHN BLANCHARD

ABSTRACT This article tries to show that combining opportunities to imitate and study with self-inspired and autonomous activities can facilitate the exploitation and exploration of different kinds of knowledge and ways of learning. This approach might inform leaders' and teachers' education and development with a focus on promoting students' capability and understanding through problem-solving and the pursuit of projects for personal satisfaction and public recognition. The intention is for effective teaching and learning to contribute to healthy, inclusive, productive communities in a sustainable world.

Introduction

In this article I will draw on philosophy, psychology, neuroscience and action research [1] to explore how school leaders, teachers and students can learn from and with one another how to plan and pursue their respective, reciprocal and shared objectives. We acquire capacity in part through physical and cognitive learning. Some of the thinking we do is an involuntary, unconscious or implicit part of what we are primarily or otherwise doing. In action, our brains automatically try to take care of what we need to do. Sometimes though we foreground our thinking, making it more of a deliberate, conscious or explicit activity – for example, when we plan, revise and evaluate our actions. Thinking then can be more or less about itself – a meta-activity.

Naturalistic learning is a combination of activities and meta-activities – listening, observing, practising, studying, memorising, imitating, visualising, rehearsing, experimenting and discussing… Learning entails discovery and rediscovery, but in education, display becomes as important as discovery. At school we are asked to show we have learned certain things; and our chances of success are reduced if we do not notice and prepare what we have to do to meet prescribed standards. We are more likely to have our performances accredited if we bring to mind what is required.

Action and Cognition

Teachers are conventionally regarded as and called practitioners, whereas their leaders and managers tend not to be. Donald Schön (1983) explored how being in a situation or role geared towards front-line action differs from developing guidance or prescription. Schön wrote: 'When the practitioner tries to solve the problem he has set, he seeks both to understand the situation and to change it' (p. 134), and so makes personal choices about what to do. (Like Michael Polanyi, quoted below, Schön used the convention of the times, which was to have 'he' as a generic subject, where now 'she or he' is usually preferred.)

Some leaders and managers try to control what others do, as though work consisted of normative situations. These leaders and managers stand aloof from local, dynamic matters, and avoid dwelling on how difficult it can be on the ground to know what problems to address first or at all. Contrastingly, as Schön wrote:

> The practitioner approaches the practice problem as a unique case. He does not act as though he had no relevant prior experience; on the contrary. But he attends to the peculiarities of the situation at hand ... Neither does he behave as though he were looking for clues to a standard solution. Rather, he seeks to discover the particular features of his problematic situation, and from their gradual discovery, designs an intervention ... The situation is complex and uncertain, and there is a problem in finding the problem.
> (Schön, 1983, p. 129)

Being ready for action entails, consciously or not, framing situations and dilemmas to fit with previous experiences. The human brain has evolved to make patterns and deductions which inform our guesses and anticipations, inevitably with the risk of getting things wrong. Disappointments and errors are a price we pay for having expectations and making predictions. Schön saw this as being accepted and even encouraged by 'reflective' institutions insofar as they have 'flexible procedures, differentiated responses, qualitative appreciation of complex processes, and decentralised responsibility for judgement and action', whereas 'unreflective' organisations, with their 'uniform procedures, objective measures of performance, and centre/periphery systems of control' (Schön, 1983, p. 338), aim to prevent too many people from making decisions and so neglect individuals' and teams' adaptive expertise.

Conventionally, teachers are thought to occupy a subordinate, circumscribed role, and leaders and managers to perform a pre-emptive, supervisory role. But Schön saw that practitioners attempt to realise solutions to problems they meet. When they fail, they may lose face or let people down, and be shown little understanding. In consequence, some practitioners resign initiative and responsibility to leaders and managers. But others, such as 'leaders in the middle', find they can carry substantial teaching workloads as well as leadership responsibilities. Steve Munby and Michael Fullan (2016) described them as personally humble yet ambitious for the organisation they work in,

honest, empathic, skilled, collaborative, courageous, passionate about their work, keen to agitate for systemic change, problem-definers, solution-designers, data-literate, intelligent about whole-organisation reform, talented networkers and connectors of people, and proficient team-leaders (p. 11). Their example blurs any lines dividing thinkers and agents.

Certainty and Ambiguity in Our Thinking

Our actions cannot help but derive from what we assuredly or tentatively know, which amounts to more than we can say, and also from what we fervently or hesitantly believe and assume, which we cannot doubt or justify for as long as we are unquestioning. Iain McGilchrist (2010) proposed that the evolution of the frontal lobes in the human brain made it possible for us both to admit uncertainty and to appreciate things from perspectives other than our own, allowing us to benefit from alternative experience, and adjust our self-centred impulses and desires in the interests of shared living (p. 22). Through its figurative and symbolising power to generate concepts, language shapes rather than grounds thinking, firming up particular ways of seeing things. This has both advantages and disadvantages: language supports consistency of reference over time and space, but on any given occasion must exclude some possibilities, restricting what and how we think.

In the left-brain hemisphere we start with a chosen 'certainty', place another alongside it, and so proceed 'as if building a wall, from the bottom up'; 'whatever lies in the realm of the implicit, or depends on flexibility, whatever can't be brought into focus and fixed, ceases to exist as far as the speaking hemisphere is concerned' (McGilchrist, 2010, p. 116). Counterbalancing and accommodating this, the right hemisphere seeks empathy before and beyond detachment; coherence before and beyond compartmentalisation; allusion and ambiguity before and beyond literalness and one-dimensional representation (McGilchrist, 2010, pp. 27-28 and 93). Seeking insight and oversight (p. 142), it grapples with experience which is:

> multiple in nature, in principle unknowable in its totality, changing, infinite, full of individual differences, while the left hemisphere sees only a version or representation of that experience, in which, by contrast, the world is single, knowable, consistent, certain, fixed, therefore ultimately finite, generalised across experience, a world that we can master. (McGilchrist, 2010, pp. 352-353)

When the right- and left-brain hemispheres work together – for example, in abductive thinking – we make inferences to the probable best or most practicable explanations (Gallie, 1952).

Tacit and Focal Awareness: motivations and satisfactions

We are tacitly influenced by how other people do things. For much of the time, and especially when things seem to go well, learning is tacit, as though our brains were infected by experience. Richard Dawkins (1982) coined the word 'meme' for an aspect of this. Gene-like, memes carry and spread ideas and behaviours via 'cultural transmission or *imitation*' (p. 192). In the same vein, Michael Polanyi (1958) explained how we gain 'personal knowledge' and become 'connoisseurs' of craft skills and professions: by 'watching the master and emulating his efforts in the presence of his example, the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself' (p. 53).We may be influenced explicitly when people speak about what they do. And when *we* are observed at work, we may learn how others regard and understand what we do, which may give rise to critical, constructive self-appraisal and development (Blanchard, 2012).

It can happen that we are drawn to learn simply for pleasure and its own sake, as in play. We are also drawn to learn for extrinsic reasons, such as wanting to placate someone or persons feared, or wanting to impress someone or persons admired. Whatever our motivation, noticing what makes the difference between run-of-the-mill and outstanding performances can mean we have a better chance of doing well. Focal awareness pays off when we check we are on track; when we plan and revise; when we deal with uncertainties or difficulties; when we teach other people; and when we show or tell others what we have attempted and achieved. Whatever helps us towards trying provides a nursery for self-efficacy, defined by Albert Bandura (1997) as our exerting influence in spheres of our lives where we have some control, so that we may become better able to bring about events and outcomes we want, and forestall undesired events and outcomes.

For example, as students mature, they may realise that, if they try, they can by and large govern their attendance, attention, and perseverance, and their to other people. Similarly, teachers may realise that, if they try, they can by and large determine how they behave towards their students – for example, reducing how often they say 'Don't' and how much they use negative language, and increasing how often they say 'Can you …?' and how much they use constructive language to scaffold their students' efforts. Leaders may realise that, if they try, they can by and large determine how meetings are run, how stakeholders are involved in decision making, and how achievements are celebrated and rewarded.

Both tacit and focal awareness are involved in Gary Klein's ([1997]2017) recognition-primed decision model which

> posits a two-stage process, starting with intuition as decision makers recognize how they need to respond, followed by deliberate evaluation as they mentally simulate a possible response to see if it will work. A blend of intuition and analysis, not just gut feelings. (p. xxii)

Klein and his colleagues found that expert decision makers tend to overlook and understate what they know. Working in difficult, unpredictable circumstances under time pressures, they adapt to having to 'trade accuracy for speed' and 'allow errors' (Klein, [1997]2017, p. 289). They debrief their experiences and steadily build for themselves an experience base for their decision making, consisting of these continually evolving capabilities:

- Judging how normal situations are
- Understanding typical goals
- Recognising generic courses of action
- Noticing anomalies and snags
- Appreciating the urgency of problems
- Responding to opportunities
- Making fine discriminations
- Spotting gaps in action plans, and seeing what causes them (Klein, [1997]2017, pp. 290-291).

Teachers might then try to blend intuition and analysis for themselves and their students. And leaders might try to blend intuition and analysis for themselves and their teachers.

Frederick Herzberg, Bill Paul and Keith Robertson (Herzberg et al, 1968) explained how leaders and managers might facilitate this. The method they advocated is 'job enrichment', which

> improves both task efficiency and human satisfaction by means of building into people's jobs, quite specifically, greater scope for personal achievement and its recognition, more challenging and responsible work, and more opportunities for individual advancement and growth. (p. 73)

An organisation's health and effectiveness are then seen to depend less on there being communication 'downward' from managers to workers, and far more on consultation 'upward' from the people doing front-line work to those who have oversight and obligations beyond the immediate. This gives a green light to 'horizontal' communication between peers in and across teams and networks. It happens when 'management becomes a service, its purpose to enable, encourage, assist, and reinforce achievement by employees' (Herzberg et al, 1968, p. 77), and 'the job itself becomes a true learning situation, its ingredients the motivators' (p. 78).

Practically and cognitively, tasks can fail to stimulate our learning and growth, either because they are too comfortably matched to our present capabilities, or because they are off-puttingly beyond our reach. Tasks that are just right have the potential to extend our knowledge, understanding and skills because, given our interest, energy and access to support, they are achievable. Learning and achievement in education, like advancement and productivity in business, correspond to the extent to which our challenges are feasible yet

stretching, inviting us to apply ourselves in a 'zone of proximal development' (Vygotsky, 1978), and bringing personal satisfaction and public recognition.

Learning to Teach, Learning to Learn, and Teaching to Learn

We thrive when we connect with and respond to our environments and communities; and society is whole when its manifestations are an inclusive expression of our diverse needs, interests and talents (Habermas, 1962). In compulsory and instituted settings we may learn and develop by engaging in activities and meta-activities others suggest to us, and by choosing them for ourselves. When school teaching combines the two, it facilitates our learning things we find satisfying and rewarding in our own terms, while leading us towards public participation and recognition. Public competence reflects our communities' priorities, while admitting and relying on individuals' influence and contribution. Health, well-being and development depend on this vital exchange between the personal and the public.

Our central nervous system is stimulated and neurons connect with one another to form pathways and circuits in the brain, spinal cord and autonomic and somatic nervous systems. Writers such as Suzanne O'Sullivan (2018) have shown that to perceive or imagine something is to create or refine patterns of neural connections, and

> to remember something is to replay a pattern of neural connections that originally occurred in response to a particular event. The connections between cells are unstable and subject to change every time they are activated. Not every replay is the same – each risks adjusting [the perception or imagination or] the memory just a little. (O'Sullivan, 2018, pp. 67-68)

Our learning is in the hazard of venturing beyond the *terra firma* of what we take for granted as known, certain, real and true, and venturing into *terra incognita* where we generate patterns and connections that are fresh and new to us at least. To be worthy of the terms, learning and remembering have to be active. Otherwise learning is no more than inconsequential replication of something that happens to us, and remembering is no more than inconsequential replication of something we have at some time had in our heads. Though it is tempting to think of mental models and muscle memories as blueprints, they are neither stored nor retrieved as film-loops, sound-tracks or data bytes. Though we sometimes hold fast to comforting or serviceable ideas and routines, our thinking and action are capable of evolving with every iteration (Frith, 2007). In Nick Chater's (2018) account:

> We are ... characters of our own creation, rather than playthings of unconscious currents within us. (p. 10)

> New actions, skills and thoughts require building a rich and deep mental tradition; and there is no shortcut to the thousands of hours needed to lay down the traces on which expertise is based. And for each of us, our tradition is unique…. Our freedom consists ... in the ability ... to reshape our thoughts and behaviours, one step at a time: our current thoughts and actions are continually, if slowly, reprogramming our minds. (p. 11)

How well we use our minds hinges on our having cause and commitment enough to put in the 'thousands of hours' (see also Gladwell, 2008). As students, teachers and leaders, whether we are taught, coached, mentored, or none of these, when we interrupt and extend our commonplace, quick, unreflective thinking, we can check assumptions, processes and conclusions (Kahneman, 2011; Ramachandran, 2011).

Achievement flows from our framing intentions, trying things out and seeing results. If teaching and leadership are to give rise to educative learning and development, they must not be formulaic or expect compliance or gratitude. D. Royce Sadler (2010) wrote that teachers' efforts are undermined by their behaving as though 'telling, even detailed telling, is the most appropriate route to improvement in complex learning' (p. 548). On its own, instructing students or teachers or leaders is unlikely to lead to *their* revising their thinking and *their* trying to enhance what they do. Unilateral transmission met with obedience is not enough when the intention is to educate towards autonomous participation and contribution.

Here are three ways of creating conditions and activities that foster personal and public motivations and satisfactions: negotiating activities; teaching for schematic thinking; and observing, analysing and reflecting.

1. Negotiating activities

The more teachers help their students be clear about what they are trying to achieve, the more students are empowered to take maximum responsibility for what they do. The more school leaders help teachers be clear about what they are trying to achieve, the more teachers are empowered to take maximum responsibility for what they do. The more governors and politicians help school leaders to be clear about what they are trying to achieve, the more school leaders are empowered to take maximum responsibility for what they do. Everyone benefits from thinking about questions like these, and acting on their answers: *What am I trying to do? What is the point of this? How will I set about it? How will I know how well I do?*

I learned about this in my fourth year of teaching. I had freedom to develop my teaching, and was experimenting with handing over chunks of time to my classes to use on activities of their own design. Some of them would choose to work on their own; others would pair up, or work as a group. Each of them had to decide what they wanted to achieve over a sequence of initially

four lessons spanning a couple of weeks. At the start, they had to say what help they needed, and how they wanted their efforts to be commented on and by whom. If they chose to change their minds as they went along, we could talk about it. They would get going, and I found I was able to do much more teaching in those lessons than I normally managed. They would come in and immediately get on with their work. I spent every second talking with individuals or small groups about things that mattered to them. On one occasion at the end of one lesson with a class of 13-to-14-year-olds, I felt I wanted to say something to them all, and looked round. I was too late; change-over time had come and everyone was leaving the room. I realised I had not spoken collectively to the class during the 70 minutes, not once. A teacher of art, design technology or computing, or an early-years teacher, might say, *How come it took you so long to work that out? We work like that all the time.* But for me it was a 'light-bulb moment': I knew *That's what I'd like all my lessons to be like.* The main difference it made to my teaching was that my students asked me to talk to them about things I wanted to teach them. I did not cajole them or listen to their excuses. I helped them do what they set their sights on. They decided what to do next and, if they did not know, they would consult someone. They shared ideas among themselves and enjoyed what their classmates were achieving. They assessed themselves and one another and were interested in my assessments because they asked for them. Those lessons belonged to them. And I discovered that what was true for my students' learning was true also for my own and my colleagues' development as teachers, and later that it applied equally to leadership.

Students can feel their activities are their own when they play a part in deciding how to do things. Across the curriculum and alongside their teachers, they can research and make a difference to how lessons and programmes of study are defined, planned, carried out, evaluated and developed. They can examine and influence changes to the running of their school – for example, in terms of how time, space and resources are used; how support, guidance and sanctions are given; how partnerships, networks and community enterprises are developed (Fielding & Bragg, 2003; Carnie, 2018).

2. Teaching for schematic thinking

Schemas are informational structures (Dennett, 2018) in the sense that *how* information is presented is at least as instructive as *what* is presented. Cognitive method can be more telling than cognitive content. Schematic thinking enables us to be more transparent and more potent than we ordinarily need or care to be. Schools promulgate schemas, selecting them from academic traditions and specific cultures. It helps to understand that schematic thinking entails choosing how to present information, and to resist treating schemas as things. Examples of schematic thinking are: listing and sequencing items or actions; comparing and contrasting; using structured movements in our bodies and strategies in sports; defining; making equations; categorising and using sets; specifying,

prototyping and making by design and function; using literary, musical and fine arts devices and genres; fair testing; and using criteria and evidence in judgement making and reasoning. These are means of organising and propelling our thinking (Piaget, 1952), going deeper and having longer-lasting effects than our accessing bare items of information or 'facts'. Thinking schematically in activities we feel are worthwhile changes how we approach and enjoy what we do and learn.[2]

3. Observing, analysing and reflecting

Students can reflect on how they respond to teaching, and so consider what inhibits and facilitates learning. One strategy is to work in small teams, rotating the roles of teaching, learning and observing. They take a skill or a concept; one teaches another, observed by the third team member:

- *When you are the teacher, your job is to help a partner do or understand something. Try not to do it for her or him; try to do more than just state what has to be understood or done. Think about showing and explaining how to do the task or understand the information, and maybe why it could be useful.*
- *When you are the learner, your job is to pay attention, ask questions, and try to do or understand what you are being taught.*
- *When you are the observer, your job is to look and listen out for what the teacher does that helps the learner, and for what the learner does that helps her or him learn.*

At the end of each episode, the observer tells the learner and the teacher what she or he noticed about what helped things go well. When each person has played all three roles, they finish by deciding together and then sharing with the whole class:

- *What makes a good observer?*
- *What makes a good teacher?*
- *What makes a good learner?*

Leaders and teachers might similarly consider what leadership and teaching have in common:

- *What makes a good teacher?*
- *What makes a good leader?*
- *What part does learning play in both?*

Learning, teaching and leadership are developed when we think for ourselves and with others about how well we are doing and about what helps us succeed. Having review-and-plan meetings with tutors, selecting examples of their work at regular intervals and transition points, and celebrating achievements on calendared occasions can help students gain perspective on their progress and learning. Teachers and leaders also can do these things in a collaborative culture which supports continuing professional and whole-school development, and formally via performance management. Using physical and/or digital portfolios

of our work with annotated feedback and reflections can help us to see where we have come from and where we might go next and into the future (Harlen et al, 1992). When summaries of our achievements need to be made for reviews, appraisals, reports and applications, we can discuss and interpret our collected work.

Conclusion

Leadership, teaching and learning in school are best conceived of and experienced as collaborative activities. We thrive as leaders, teachers and students when we are regarded and treated as active and thoughtful partners in developing our physical, mental and moral capabilities. To succeed as students, as teachers and as leaders, in our own as well as other people's terms, we need to be motivated and interested enough to adopt tasks and projects suggested or required by institutional authorities *and* instigate activities for ourselves. Our capacity for personal autonomy in social, cultural and political participation and contribution develops as we make connections between what we are interested in and opportunities we are offered.

We do well when we learn, teach and lead in unplanned as well as planned ways: sometimes articulating our intentions and reflections, sometimes not; sometimes relying on our own initiative and judgement, sometimes not; sometimes being guided and coached, sometimes not. We can recognise that implicitness and a desire to be independent are natural and valuable, but not sufficient for healthy development and achievement.

In addition to learning from one another and research, leaders learn to lead well by listening to and observing those they lead, and teachers learn to teach well by listening to and observing their students. Students too grow by teaching and leading one another and other people.

In our learning, teaching and leadership, we develop by talking informally and formally about:

- *What am I/are we trying to do?*
- *What is going well, and what not so well?*
- *What am I/are we getting better at?*
- *What seems to bring success?*
- *What shall I/we focus on next?*

All the strategies referred to here, and more, are explored in my book *Inside Teaching: how to make a difference for every learner and teacher* (Blanchard, 2017).

Acknowledgements

Particular thanks to Jon Hawksley for giving me his account of the human brain's input-output functioning; to Frank Newhofer for steadfast criticality; to Harry Torrance, who helped me get to the point and towards shorter sentences;

and to Jacky Blanchard for diverse conversations about psychology and learning.

Notes

[1] Leading writers about action research in education include Lawrence Stenhouse, John Elliott, Jack Whitehead, Philippa Cordingley, Andrew Pollard and Mary James. The tradition, which covers public services and commercial enterprises, may be traced to the American school of pragmatism (Menand, 2001) and Kurt Lewin's work on fulfilling and enhancing capability in the workplace (Adelman, 1993).

[2] Schematic learning is illustrated exceptionally well by Michael Armstrong (1980), Stephen Rowland (1984), Gordon Wells (1986), Chris Athey ([1990]2007), and Elizabeth Carruthers and Maulfry Worthington ([2006]2008).

References

Adelman, C. (1993) Kurt Lewin and the Origins of Action Research, *Educational Action Research*, 1(1), 7-24. https://www.tandfonline.com/doi/pdf/10.1080/0965079930010102

Armstrong, M. (1980) *Closely Observed Children: the diary of a primary classroom.* London: Writers and Readers/Chameleon.

Athey, C. ([1990] 2007) *Extending Thought in Young Children: a parent–teacher partnership.* London: Paul Chapman. https://doi.org/10.4135/9781446279618

Bandura, A. (1997) *Self-efficacy: the exercise of control.* New York: W.H. Freeman.

Blanchard, J. (2012) *Peer Observation: improving teaching and learning through collaboration* (CD-ROM). London: Optimus Education.

Blanchard, J. (2017) *Inside Teaching: how to make a difference for every learner and teacher.* London: Routledge. https://doi.org/10.4324/9781315200262

Carnie, F. (2018) *Rebuilding Our Schools from the Bottom Up: listening to teachers, children and parents.* London: Routledge.

Carruthers, E. & Worthington, M. ([2006]2008) *Children's Mathematics: making marks, making meaning.* London: SAGE.

Chater, N. (2018) *The Mind is Flat: the illusion of mental depth and the improvised mind.* London: Penguin Random House.

Dawkins, R. (1982) *The Selfish Gene.* Oxford: Oxford University Press.

Dennett, D. (2018) *From Bacteria to Bach and Back: the evolution of minds.* London: Penguin Random House.

Fielding, M. & Bragg, S. (2003) *Students as Researchers: making a difference.* London: RoutledgeFalmer.

Frith, C. (2007) *Making up the Mind: how the brain creates our mental world.* Oxford: Blackwell.

Gallie, W. (1952) *Peirce and Pragmatism.* Harmondsworth: Penguin.

Gladwell, M. (2008) *Outliers: the story of success*. New York: Little, Brown and Company.

Habermas, J. (1962) *The Structural Transformation of the Public Sphere: an inquiry into a category of bourgeois society*, trans. T. Burger, 1989. Cambridge, MA: MIT Press.

Harlen, W., Gipps, C. Broadfoot, P. & Nuttall, D. (1992) Assessment and the Improvement of Education, *Curriculum Journal*, 3(2), 215-230. https://doi.org/10.1080/0958517920030302

Herzberg, F., Paul, Jr., W. & Robertson, K. (1968) Job Enrichment Pays Off: five studies carried out in British companies show how this concept may be applied in furthering the attainment of business aims, *Harvard Business Review*, 46 (2), 61-78.

Kahneman, D. (2011) *Thinking, Fast and Slow*. London: Penguin.

Klein, G. ([1997]2017) *Sources of Power: how people make decisions*. Cambridge, MA: MIT Press.

McGilchrist, I. (2010) *The Master and His Emissary: the divided brain and the making of the western world*. New York: Yale University Press.

Menand, L. (2001) *The Metaphysical Club: a story of ideas in America*. New York: Farrar, Straus & Giroux.

Munby, S. & Fullan, M. (2016) *Inside-out and Downside-up: how leading from the middle has the power to transform education systems*. Reading: Education Development Trust and Motion Leadership.

O'Sullivan, S. (2018) *Brainstorm: detective stories from the world of neurology*. London: Chatto & Windus.

Piaget, J. (1952) *The Origins of Intelligence in Children*, trans. M. Cook. New York: International University Press. https://doi.org/10.1037/11494-000

Polanyi, M. (1958) *Personal Knowledge: towards a post-critical philosophy*. Chicago, IL: University of Chicago Press.

Ramachandran, V. (2011) *The Tell-Tale Brain: unlocking the mystery of human nature*. London: Heinemann.

Rowland, S. (1984) *The Enquiring Classroom: an introduction to children's learning*. London: Falmer Press.

Sadler, D.R. (2010) Beyond Feedback: developing student capability in complex appraisal, *Assessment & Evaluation in Higher Education*, 35(5), 535-550. https://doi.org/10.1080/02602930903541015

Schön, D. (1983) *The Reflective Practitioner: how professionals think in action*. London: Temple Smith.

Vygotsky, L. (1978) *Mind in Society: the development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wells, G. (1986) *The Meaning Makers: children learning language and using language to learn*. Portsmouth, NH: Heinemann Educational Books.

JOHN BLANCHARD has been a secondary school teacher, local authority adviser, higher education tutor and independent consultant.
Correspondence: j-blanchard@hotmail.co.uk