

Active learning is better learning

MST's new series on better classroom practice gets under way as **Chris Watkins** considers the importance of active learning

If you read the introductory article to this series in the last *MST*, you might have taken up the suggestion of asking colleagues to analyse a time when learning was really good in a classroom they know. If so, you have been doing what this article is all about.

During that activity you might have heard your colleagues talk about times when classroom learning was 'hands on' – when there was a particular product to create, or something to be enacted, or when learners made plans about how to proceed, and so on. It's these sorts of features that we might group together under

the heading of 'Active learning'. Perhaps some of your colleagues even use that adjective. I have been surprised how many pupils in schools use it when asked how they want their learning to be. In one survey of pupils in six primary schools, Year 6 pupils said that learning would be improved by "more active work in groups". Meanwhile, Year 1 pupils were using terms such as "games in numeracy", "more play (like we had in Reception)", "more drama" (or



“acting”) and “more model making”.

And it's not only pupils who say this: other research has shown that there are significant commonalities in teachers' and pupils' perceptions of effective classroom learning and that they prioritise active approaches.

So how come we see so little active learning in the dominant model of the classroom? A study in Northern Ireland primary schools showed a trend of learners reporting less use of active learning strategies as the years of schooling increase (see figure 1). Furthermore, those learners who are described as being of 'low ability' (which is a misnomer for 'low-attaining'), report a faster decrease in their use of active learning strategies over those years. This finding can be read as a direct connection between active and attaining.

Figure 1: Survey questions on active learner strategies

“I spend some time thinking about how to do my work before I begin it” (planning)
 “I try to figure out how new work fits with what I have learned before in this class” (prior knowledge activation)
 “When we have difficult work to do in the class, I try to figure out the hard parts on my own” (independence)
 “I ask myself questions while I do my work to make sure I understand” (self-monitoring)
 “I go back over work I don't understand” (self-monitoring)
 “When I make mistakes, I try to figure out why” (evaluating)
Students respond on a four-point scale: strongly disagree, disagree, agree, strongly agree

One part of the answer to why we see so little active learning is that it is often over-simplified. It can conjure up an idea of activity for its own sake and soon degenerate into fearful images of pupils running around the classroom, or children playing in a sandpit. These images are erroneous because if we take it to the limit, there is no need for active learning to involve any obvious behavioural activity: just think of an active reader of texts, who may be sitting quietly, involved in many high-level processes to do with learning, but none of them showing in outward behaviour.

Conversely, we sometimes hear the simple phrase 'learning by doing', but there are plenty of examples of humans repeatedly doing, but without much learning occurring! As one friend has said to me: “Practice doesn't make perfect: practice makes permanent.” So let us move on with the clarification that active learning is not simply about behaviour, but is about active sense-making.

'Active learning' indicates some sort of contrast with learners being passive, but it's not a simple polarisation. All learning is active in some sense (if it really is learning), but some kinds of learning are more active than others. So we use the term to recognise that learning is an act of

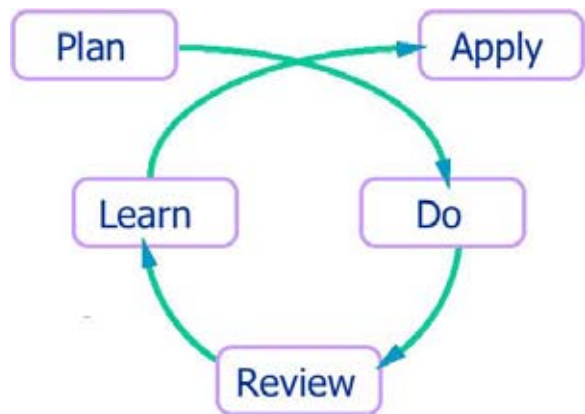
construction, not one of passive reception.

Active learning aims to promote:

- active engagement – with materials and resources, with ideas, and perhaps with other people
- active sense-making – standing back from the experience, reflecting to create knowledge, extracting meaning and consequences (summarised in the sequence 'What?' – 'So what?' – 'Now what?')

One answer to the simplifications of active learning, which I hinted at above, is to clarify what actually is involved. Figure 2 shows a model of the process of active learning which highlights its various phases.

Figure 2



“Do and do some more”

What's the current profile of these elements in classrooms you know? Some classroom practitioners come to realise how much of classroom life is characterised by 'do, do, and when you've finished do some more'. And how little classroom time is allocated to the reflection which is so necessary to convert the doing into learning. The elements in the model can also highlight issues about planning and who is currently doing it: teachers up until midnight, while students do virtually none.

So on closer examination the adjective 'active' when applied to learning can highlight these important elements, each of which can promote the qualities we wish to promote:

- Plan*: Intentional learning
- Do*: Engaged learning
- Review*: Reflective learning
- Learn*: Mindful learning
- Apply*: Consequential learning

An example may help us consider the process further. Let's consider the idea of active reading, in which we can encourage anyone to take the steps outlined below (and as a result move themselves beyond the dominant idea that reading is to get a text into your head):

Leading Learning in Classrooms

Plan: Skim the text, what's it about? What do I already know? What do I want to know?

Do: Read, with the above questions in mind, small chunks at a time

Review: Ask 'what's the message?', 'what do I think?'

Learn: Summarise the main idea or points. Explain to someone

Apply: Predict what will happen next, if these ideas are taken forward

You might recognise that the example incorporates elements of some well-designed approaches to reading, such as SQ3R and Reciprocal Teaching, both of which already have an impressive record of results in improving reading comprehension. On helping one Year 5 class learn about this, Micah wrote in the class journal: "Very interesting indeed, and helpful. I should use SQRRR with myself and other people who don't know. I could share it with my family."

Micah's comment reminds us that learners will feel enthusiastic about active learning if it has an authentic impact. When a positive consequence emerges, and a sense of competence with it, one cycle stimulates other ones to follow. And this element of consequential learning is something which is missing from many current initiatives: learners learn how to improve in artificial literacy tests rather than learn to become an authentic writer and have impact.

A cycle of active learning may take a short period of time (a 20-minute reading exercise) or a long period of time (a

term-long design-and-make project). And contrary to the view that it's mainly the sort of thing you do in PSHE) can be activated in any area of knowledge, as the brief indications shown in figure 3 may suggest.

As colleagues consider such brief ideas, they will doubtless feel themselves in tension with the dominant view: teaching is telling and learning is listening. Most teachers who can remember their motivation for being in the profession handle this tension easily. Then they may identify another tension: that active learners do not always find favour with teachers who are wishing for compliance from learners. The vast majority of teachers I meet have little difficulty in clarifying that they are not such a teacher.

Managing the development

The above points are written with the key practitioner in mind: the classroom teacher. So how can colleagues who are interested to develop these themes from their role as managers in schools take the issue forward? A number of elements may be important.

First, *help teacher colleagues to bring to the surface their own experience* – of both their own learning and of times when learning has been best in classrooms they've known. Help to identify the fact that these times are regularly characterised by features of active learning. This helps to counteract the trend of their knowledge becoming submerged under the weight of the teacher-centred paradigm used in guidance over the last decade.

Figure 3: Cycles of active learning

	English	Maths	Science	Drama	History
Plan	Clarify purpose and point	Clarify the problem	Raise a question and design test	Imagine role and plot	Decide focus
Do	Create a draft	Try out strategies	Conduct experiment	Rehearse	Collect sources
Review	Try out with a reader	Compare their effects	Analyse results	Revisit	Identify standpoints
Learn	Consider the feedback received	Decide which strategy to choose	Relate to key ideas	Re-imagine	Evaluate
Apply	Redraft and publish	Use on another example	Predict another result	Perform	Consider other time or place

The content of what colleagues derive from their real experience of classrooms will be more complex and more effective than the dominant propaganda of 'teach your socks off, bang on about performance and work harder'.

Use active learning with colleagues. In order to examine the detail of applying these ideas to their students and context, there's no better way than using the action learning cycle. Have colleagues set up meaningful tweaks to their practice and exchange with each other using the 'Do', 'Review', 'Learn' and 'Apply' headings. This relates to the research finding that schools in which a real focus on learning has developed have only one organisational condition that explains it – inquiry – and also the finding that teachers may 'know' about the benefits of active learning, but they carry on with a teacher-centred 'telling' approach until they experience active approaches themselves.

Thirdly, *review planning practices.* Some of the overbearing approaches demanded from teachers today contribute to an instruction-based climate, which also makes learners passive. Teachers may be planning until midnight, while students have no role in planning. Research has shown for decades that more planning by teachers can be linked to less responsiveness from teachers (and in some studies to lower achievement by students). Planning for active learning requires a shift to planning for learners' activity rather than planning for what the teacher does.

Next, *support skill development*, including the styles of questions that facilitate this sort of cycle:

Plan: How will you go about this? What are you aiming for? How will you know it's good?

Do: How's it going?

Review: What did you notice? What was most important? What went well?

Learn: How do you make sense of that? What else does it relate to?

Apply: Is there another situation like this one? What could we transfer?

Furthermore, *work with the 'ah, but...'s.* Teachers' reservations will always be present, and it's best that they are voiced and addressed. Many are predictable: "I have to cover the curriculum." Sorry, who is covering the curriculum? Isn't it the students' task to do that? And the more active they can be in that task, the better the results. "It takes too long." So what's the short cut? Ah, teacher telling them (again). "It's a lot of planning." It may feel like that in the early phases, but as the balance shifts towards planning for learner activity, and learners become better planners too, it may take less planning time and therefore liberate you for more time to respond. "It will all fall apart and the behaviour will worsen." That's a classic fear when we do something different in the complex context of the classroom, but if the tasks and prompts are well designed you'll get more engagement and better behaviour.

Finally, *review your current management practices.* Colleagues with management responsibilities can find that their practices carry messages which do not contribute



to the development of active learning in classrooms. For example, do your school's approaches to classroom observation use frameworks which focus in learners and learning? Or do they use teacher-dominated frameworks, as in the awful Ofsted. If so, they will soon fall into the classic distortion of classroom observation – focus on the teacher and focus on the negative. One part of an alternative framework is to focus on learners and their planning, doing, reviewing learning and applying. Other themes to be developed in later articles of this series will be brought together into classroom observation frameworks at the end.

Better results

Last, but not least in the current context of pressure and compliance, colleagues may not know that considerable research, ranging from large surveys to focused experimental studies, shows that active learning gets better results. One study in the north-east of England examined how much pupils plan and reflect, and whether this relates to exam performance: the scores of pupils who plan and reflect least on a GCSE project were 30 per cent of the scores those who plan and reflect most.

The development of more active learning is one element in changing the culture of a classroom. Culture may not change overnight (although it may do so more quickly than you predict) but it is the thing that has the impact. A culture of active inquiry contrasts with a 'right answer' culture, in which learners of all sorts (young people and adults too) learn that it's effective to be passive, and attainment suffers accordingly.

Some studies have shown that one of the quickest ways to make the change from a passive learning stance to an active learning stance is to change the purpose from that of learning in order to be tested to that of learning in order to teach someone else. Those who learn in order to teach show more intrinsic motivation, and demonstrate higher conceptual learning. This point makes the connection to the dimension of effective classroom learning which will be addressed in the next issue: collaborative learning.

Chris Watkins is a reader at the Institute of Education, University of London, and an independent project leader with schools. See www.ioe.ac.uk/people/chriswatkins