Adaptive teaching – *what are we adapting to, and why?*

It seems that everyone is talking about adaptive teaching at the moment. With inclusion at the heart of the new Ofsted framework and the emphasis on 'inclusive mainstream', it is not surprising that there is a lot of discussion about how we might meet the varying needs of learners. However, does adaptive teaching offer fresh insights into this challenge or a repositioning of previous thinking?

It seems that in some explanations of adaptive teaching differentiation is dismissed as a labour-intensive approach which pigeon-holes learners and formative assessment is reduced to a series of techniques. However, when we start from the principles of formative assessment rather than classroom techniques then it is clear that effective use of formative assessment provides a coherent, tested approach which goes further than many definitions of adaptive teaching. Explanations of adaptive teaching frequently highlight three of the five strategies for embedding formative assessment set out by Dylan Wiliam:

1. Clarifying, sharing and understanding learning intentions and success criteria.
2. Engineering effective classroom discussions, questions and tasks that elicit evidence.
3. Providing feedback that moves learners forward.

However, some iterations omit the last two strategies, which play an essential role in meeting the needs of all learners:

4. Activating students as learning resources for one another.
5. Activating students as owners of their own learning.

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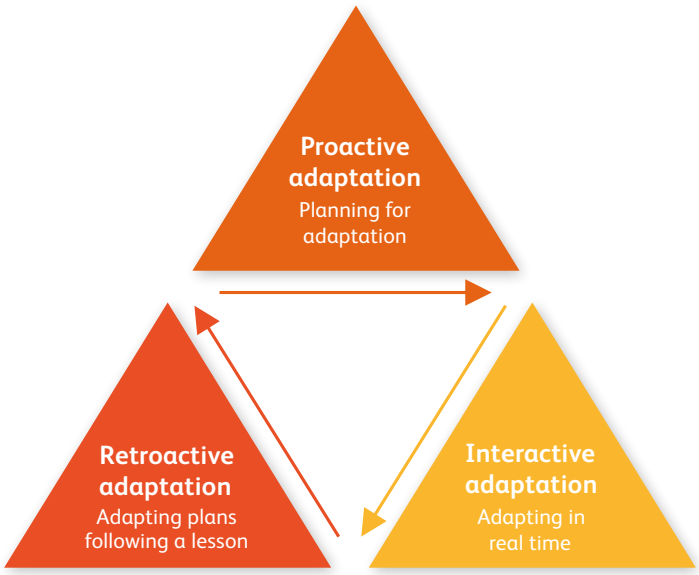
Why is adaptation needed and what are we adapting to?

The major reason for adapting may be that we discover that the teaching has been more successful for some rather than others. We may know that some learners have a higher working memory than others, that some are able to apply relevant prior learning, that some have known additional needs and be aware that there are probably others with unidentified needs. But are we adapting to learner needs on the basis of sound, current evidence, or is there a risk that adaptations are being made on the basis of preconceptions and assumptions?

It may be helpful to think of this in terms of proactive, interactive and retroactive adaptation.



Proactive adaptation

Proactive adaptation, or planning before a lesson, allows for specific adjustments to be made for particular learners in advance of teaching. It requires the teacher to anticipate where learners, either collectively or individually, may experience challenge or misunderstand. Having identified likely pitfalls, the teacher can then provide support or reinforcement as required. This might require specific adaptations – for example access to assistive technology for some learners; more broadly, you may be planning how and when you might look to adapt your route through the learning – e.g. use of a hinge point question.

The ways in which pupils tend to experience difficulty in a particular area of learning tends to be relatively predictable. However, in practice, it can be difficult for teachers to be responsive given the volume of curriculum content. Where teachers are utilising a series of pre-planned lessons, there will always be the need for them to apply their professional judgement and knowledge of the learners they will be working with. So, proactive adaptation may be less about planning different activities than anticipating challenges and ensuring that there is sufficient slack within your plans to enable you to respond flexibly, enabling instruction to be contingent on task performance rather than pre-determined.

Interactive adaptation

As already noted, there is considerable correlation between effective interactive adaptation and effective use of formative assessment. To explore what this means in practice, it is essential to start from the principles of effective formative assessment. Without fully understanding why each of these elements is important and thinking about how you might apply the key principles in your context, there is a risk that teachers try to deploy a series of disjointed techniques.

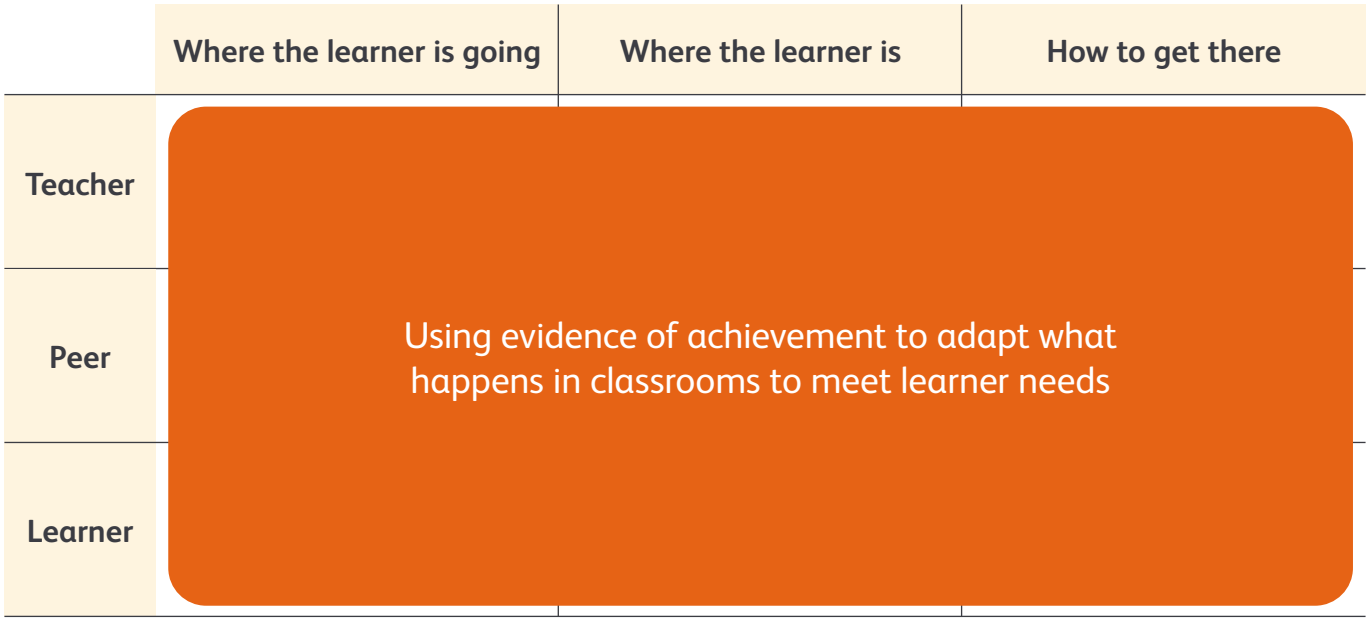
The five strategies of formative assessment

	Where the learner is going	Where the learner is	How to get there
Teacher	Clarifying, sharing, and understanding learning intentions and success criteria	Engineering effective discussions, tasks and activities that elicit evidence	Providing feedback that moves learners forward
Peer		Activating students as instructional resources for one another	
Learner		Activating students as owners of their own learning	

A simplified view

	Where the learner is going	Where the learner is	How to get there
Teacher	Before you can begin	Responsive teaching	
Peer	The learner's role		
Learner			

An even simpler view



It is also important to fully consider the two principles which tend to be missing – namely those that consider the role of the learner in this process. Omitting these remaining principles misses an important opportunity. When pupils are activated as owners of their own learning, this encourages meaningful dialogue between learner and teacher, in which the pupil feels empowered to articulate their learning needs and the adaptations that might be beneficial. By actively supporting pupils to take ownership of their own learning and support the progress of others, learners develop life-long learning skills and make better progress. It also shifts the emphasis when thinking about adaptive teaching away from the onus being solely on the teacher to adapt and find solutions towards a more collaborative approach. Adaptation is most successful when it is an integral part of a collaborative process of learning - a dialogue between teacher and learner and learner to learner.

Our ability to adapt learning successfully depends to a large degree on the quality of the evidence we are collecting. If we do not have an accurate picture of how learning is progressing for different pupils, we are unlikely to be able to tailor adaptations appropriately. Data becomes evidence when it is used as the basis of a decision. Effective use of formative assessment is of fundamental importance in this process. A key question becomes 'how expert are teachers in eliciting and acting upon evidence?' This is not about time served, but effective practice, attentiveness, adaptability and responsiveness.

Teachers elicit this data through attentiveness to task performance. 'Noticing' is the essential, active process of identifying pupils' learning needs in the moment, which allows teachers to adjust their instruction to improve outcomes.

Noticing requires teachers to look constantly for evidence during the lesson to see if pupils are actually understanding the material. It enables us to gather evidence, triangulate and validate it through a process of inquiry, rather than jumping to hasty conclusions. Formative assessment, properly enacted, makes learning visible, not to judge it, but to improve it.

Retroactive adaptation

Lastly, it is also important to consider retroactive adaptation. It is easy for adaptive teaching to be seen in a short-term sense – providing access or extension to tasks during the lesson, but here we need to make a distinction between learning and task performance. Proactive and interactive adaptations support learners to perform successfully during the lesson, but may or may not support longer-term learning.

Cognitive processes such as encoding, retrieval and transfer are frequently used to support longer-term memory retention and to check the extent to which learning has 'stuck.' However, this prompts the knotty question of how you respond to what you find out. If five people in a class of 28 haven't learnt or understood a key unit of learning, what can you do about it? Pressure to cover curriculum content often means that reteaching is not an option – and if the majority have got it, the teacher may decide the only option is to move on regardless. Often the main challenge is stopping.

Again, this brings us back to curriculum planning. If curriculum plans clearly articulate a distinction between essential and desirable learning, it becomes easier for teachers to make informed choices about how to respond to assessment. This retroactive adaptation might happen during a lesson or across a sequence of lessons – allowing time to check for understanding and to respond to revisit and reinforce as needed. The work of Larry Ainsworth* is helpful in considering what constitutes essential learning. He suggests the following selection criteria to inform the selection of 'Priority Standards':

Endurance: knowledge and skills that will have value beyond the unit of work – both in terms of academic progression and value in later life.

Leverage: Learning which can be applied to further learning within the content area and across other content areas.

Readiness for the next level of learning: The knowledge and skills that learners need to be able to access subsequent learning.

External exams: The concepts and skills that learners will need for examinations and competency tests within and beyond school.

*Larry Ainsworth, ***Prioritising the Common Core: Identifying Specific Standards to Emphasize the Most*** *(2013)*

If we view adaptive teaching as a cycle, we are encouraged to see learning as a contingent process rather than a linear one. The teacher's learning in this retroactive phase informs meaningful adaptations in the future, providing a clearer sense of what they are adapting to.

Teaching to the top – or making learning accessible for all?

Lastly, a focus on adaptive teaching prompts some interesting questions around what informs the choices we make about how to teach. Frequently the advice has been to "teach to the top" – with this term becoming synonymous with belief in an aspirational culture in which all learners can succeed. Some explanations of adaptive teaching stress the importance of teaching to the top and scaffolding for those who may find the learning more challenging. Even with the proviso that scaffolds should only be temporary, and plans in place for their removal, this runs the risk of revisiting some of the often cited criticism of previous approaches to differentiation – requiring teachers to plan different routes through a lesson and dividing learners into different groups.

Instead, perhaps adaptation starts from a few key questions:

- What is the essential learning? What does everybody need to know, understand or be able to do?
- What is the inherent difficulty? Which ideas/concepts/processes are people likely to struggle with?
- How can I break down the learning into small steps that ensure all learners can access it?
- What further specific adaptations do particular learners need to access or extend the learning.

Clearly, we want to work towards a system that maintains high expectations of all learners . However 'teaching to the top' can, in practice, mean working in a way which advantages learners with a high working memory.

It also runs the risk that programmes of learning move on at pace, without addressing learning gaps. Deploying approaches that support learners for whom learning is more challenging does not need to mean setting low expectations – these approaches may be beneficial for all and support a focus on longer term learning rather than task performance.

The Embedding Formative Assessment programme, which has been shown to support longer-term development of teachers' practice, follows an approach to professional development that focuses on choice, flexibility, small steps, support and accountability. Learners of all ages and abilities tend to benefit from small steps, a high success rate and practice. Perhaps a helpful starting point when we are thinking how to adapt is not to consider differences but rather what might work for all.

Questions for reflection and discussion:

Proactive adaptation	Interactive adaptation	Retroactive adaptation
1. What do I know about the needs of learners? 2. What 'quality evidence' do I have based on prior learning? 3. Am I confident that my judgements are based on sound evidence, rather than assumptions, stereotypes or generalisations? 4. Are there any predictable difficulties (challenging concepts, misunderstandings, misconceptions)? 5. How will I plan and sequence learning to account for predictable difficulties? 6. Where in the lesson might there be opportunities to reteach aspects of learning from previous lessons? 7. What learning and content do I consider essential or desirable? Why?	1. How will I elicit 'quality evidence' to inform teaching, and limit the risk of assuming that pupils know something when they don't? 2. How will I make better decisions based on the evidence collected? 3. Have all learners understood the essential learning? Who has/has not? 4. Where in the lesson might there be opportunities to reteach aspects of learning from the lesson, should this be necessary? 5. What 'in flight' actions and adaptations might be needed as new, or better, evidence of learning emerges? 6. How can I make the most of learning resources available (adults, learners, peers)?	1. What new evidence have I gathered to better inform my understanding of learner needs? 2. What assumptions have been challenged? 3. Do any pupils have gaps in essential learning? How can I address that? 4. How will I ensure that learning is consolidated and retrieval is possible? 5. Can learning be applied successfully and transferred to new contexts? 6. What adaptations might be necessary to future planned activities?

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