Adaptive Instructional Coaching

Going Beyond Technique

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iris CONNECT

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Introduction

Classroom teaching really matters. The influential, *'What Makes Great Teaching?'* report (Coe et al., 2014) highlighted that the quality of instruction is the most important factor influencing student outcomes.

Effective instruction in the report is characterised as involving clear explanations, active questioning and a focus on student understanding. The authors also stress the importance of teachers using well-structured lessons that help students engage with and understand the material deeply.
While teacher clarity, modelling of concepts and scaffolding learning are all key elements that allow students to grasp complex ideas.

Alongside teacher subject knowledge, behaviour management and feedback, these factors make up the foundation of effective teaching.

The car crash of recruitment and retention

However, we are currently in the grip of a teacher recruitment and retention crisis. So, even just getting teachers in front of children is proving challenging. The National Foundation for Educational Research (NFER) highlights that the teacher recruitment and retention crisis in England has intensified, especially in the wake of the COVID-19 pandemic. Their 2023 report indicates that the number of teachers entering the profession remains significantly below target, with Initial Teacher Training (ITT) recruitment for secondary school subjects like physics and modern languages at critical lows, reaching only 50% of required levels.

They attribute the crisis to a number of factors, including excessive workload, a real-terms pay cut and worrying retention rates. Yet, they also highlight the critical link between teacher retention and professional development (2020).

One of the key drivers of teacher retention is the agency teachers have over their professional development. Teachers who feel that they have greater control over the way they develop their skills, plan lessons and choose teaching methods, report higher levels of job satisfaction and are more likely to stay in the profession.

Agency in this sense is multifaceted and certainly does not mean teachers doing as they please without support or scrutiny. Some teachers may require considerable support to make informed decisions about their development, others less so, in either instance exercising agency not only places the decision making itself in the frame of professional development (which, as we will argue, is intrinsically beneficial) but also increases the likelihood that the development is clearly linked to the needs of the teacher and their students.

In more concrete terms one can also see agency through the lens of workload.

A 2023 report defined agency as 'a facet of workload, reflecting how much influence teachers feel they have over their working patterns and day-to-day tasks and therefore how manageable workload feels.'

Professional development matters

If classroom teaching makes the biggest difference to student outcomes and agency makes a difference to teacher retention rates, then it stands to reason that the professional development (PD) teachers receive should be focused around these factors. PD needs to give teachers the opportunity to learn about strategies, see them modelled, as well as having the opportunity to practise themselves. Yet, too often, teachers indicate that they find their PD neither useful nor relevant to their specific needs or classroom contexts.

In the OECD's Teaching and Learning International Survey (TALIS, 2018), only 47% of teachers across OECD countries felt that professional development had a significant impact on their teaching practices. Many teachers reported that PD did not address their individual needs or was too general to be useful in their specific subject areas. A report by Wellcome Trust (2018), focused on the UK context, found that many teachers described their PD as being disconnected from classroom realities and lacking in continuity. While in a survey conducted by the Teacher Development Trust (2015), many teachers expressed dissatisfaction with the relevance of PD. They labelled PD as too generic and offering little practical application to their day-to-day classroom teaching.

Luckily, we know more now about what makes effective professional development than we have ever known. In 2021, the Education Endowment Foundation conducted a metaanalysis where they focused on the active ingredients of the most effective professional development in schools. They identified that professional learning programmes need to focus on four key mechanisms: building knowledge, motivating teachers, developing techniques, and embedding practice. They also specified that leaders needed to ensure that PD is sustained and iterative, with opportunities for active learning and collaboration, as well as being context-specific and relevant to teachers' everyday challenges.

One of the key recommendations for those leading professional development in schools was that they should provide ongoing support for teachers.

This includes coaching and mentoring, in order to sustain changes in practice and bridge the gap between research and practice.

The challenge

Although this sounds simple, in practice, rolling out professional development at scale can be challenging. Schools are complex environments. Elmore (2004) discussed the complexities of instructional change and reform in schools and highlighted how schools operate as interconnected systems. He emphasises that improving instruction involves addressing a network of relationships among teachers, students and leaders, which makes schools inherently complex. Often, the issues senior leaders are trying to solve can be characterised as 'wicked problems' (Rittel and Webber, 1973) as they are complex and challenging.

The wicked problems schools face are often hard to describe and have many parts - some of which may not be visible. They also involve multiple stakeholders, with varying opinions and can have unclear boundaries, with unforeseen consequences. This means that there are no clear-cut fixes: There is no way of knowing which course of action is best, or if a sufficient solution has been achieved.

As Dylan Wiliam says, 'everything works somewhere; nothing works everywhere' (2018). It is no wonder then, that sometimes well-meaning professional development initiatives do not have the desired effect. It is about re-centring what attributes we actually want in effective teachers, and giving them the reflective tools which will foster the longevity in the classroom so desperately needed by our children. This means placing technique within a broader network of decision making, theory, dialogue and community.

What do teachers need?

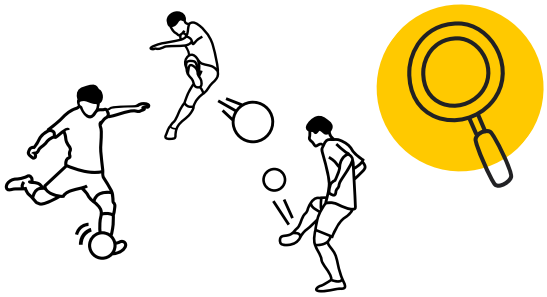
Of course, we want our teachers to be passionate about their subject or phase and to have the intrinsic motivation to want to improve. They also need to have the knowledge, skills and techniques to be able to teach well. As well as this, they need to have the decision making skills which mean they know what strategy to deploy in different scenarios and situations.

When referring to knowledge, this can include the knowledge of research, subject knowledge or the knowledge of their schools and classes. There are many PD programmes which focus mostly on knowledge, and while this is important, focusing on just a transmission of knowledge alone can lead to teachers who can cite Rosenshine's (2012) ideas about questioning, but are unable to translate that into strategies in the classroom. This is sometimes referred to as the 'knowing doing gap' (Pfeffer and Sutton, 2000).

Technique and skill is interlinked. Techniques are a sequence of actions, which are sometimes codified to help teachers master them. Skills refers to the ability to enact these techniques at the right time, for the right reason.

This ability to do the right thing at the right time for the right reason is about understanding the situation, your own agency, your goals, and crucially, your options. In other words, your situational awareness.

Let's examine skill through the lens of sports coaching. In football for instance, a technique refers to the physical movements required to perform an action and every technique is made up of small and sequential actions e.g. dribbling, controlling the ball or shooting.



Similarly, in teaching, we might codify techniques into a series of action steps. However, a skill is the ability to create an advantageous situation or an opportunity to successfully execute a technique. In football, this might be a perfectly timed run into the penalty area to meet the ball. In teaching it might be knowing when to use a technique such as 'turn and talk' to purposefully structure classroom dialogue because we want to formatively assess student's understanding of a complex idea.

In our example the footballer and the teacher possess a refined sense of their position and role within a larger system. They anticipate likely scenarios and set clear goals for each. Crucially, they excel at identifying relevant environmental cues that guide their actions while disregarding distractions. This adaptive selection of techniques based on situational awareness is what distinguishes experts from novices in any field where responding to dynamic changes is essential.

In both cases, the skill ultimately leads to the technique. Yet, over the last decade, the word 'skill' has become somewhat maligned, as it has been juxtaposed with the word 'knowledge' and portrayed as the soft option. However, the relentless focus on techniques in teacher professional development, without the skills of when to execute them may be part of the problem with some professional development programmes.

Situational awareness, or skill, can only be derived through real world practice - be that in the form of rehearsal, scenarios or classroom practice (Ericsson and Pool, 2016).

It is about developing a teacher's perception, comprehension and prediction in varying contexts. The more authentic the practise the greater the variation there is to discuss and learn from. Therefore, as well as out of context rehearsal, we must extend support where it matters - the real world practice of the classroom. This is still an ingredient which is sadly still missing from many PD programmes. Teachers can have lots of techniques in their repertoire, but unless they have the skill - the understanding of when to deploy these, they will not develop the flexibility to react appropriately in context.

If any of these elements are missing, we risk teachers becoming routine experts, rather than adaptive.

What is the difference and why does this matter?

Routine versus adaptive expertise

Routine expertise and adaptive expertise represent two different approaches to problem-solving and skill application. Routine experts have a high level of proficiency in performing tasks within a familiar context. It is based on repetition and the mastery of well-defined procedures or practices. In teaching, this might be the out of context practice of common challenges teachers face, such as exit and entrance routines, alongside a coach. That isn't to say that adaptive expertise forgets the routine tasks. It doesn't, as it has all the efficiency of routine expertise too.

Adaptive experts do what usually works, but the difference is that they also notice when to do it differently and have the repertoire of skills to act appropriately.

For more novice teachers, rehearsing a core set of teaching routines is useful because it creates automaticity, which frees up their working memory to be able to focus on other challenges in the classroom. Automaticity refers to the ability to perform a skill or task with little conscious effort or awareness, usually as a result of extensive repetition.

However, it often arises from routine practice rather than deliberate practice. Also, once teachers are proficient in a technique and possess the skill to know when to deploy it, automaticity does not necessarily lead to continued improvement beyond a certain level (Ericsson and Pool, 2016). In fact, tasks performed automatically tend to stabilise at a plateau, where the person is no longer actively challenging themselves. Indeed, Ericsson points out that although automaticity is useful for performing routine tasks, it can be detrimental to achieving expert performance. This is because automaticity may prevent individuals from identifying mistakes or areas for improvement, as they are no longer consciously engaged with the process.

On the other hand, adaptive expertise involves the ability to apply knowledge and skills flexibly across different situations, including unfamiliar or novel challenges. It goes beyond routine procedures to creative problem-solving and innovation. Adaptive experts can modify or invent new strategies to handle novel problems and tend to seek out and implement new ideas when confronted with unfamiliar situations. This means that adaptive teachers are reflective practitioners, who constantly assess and adjust their approach. In summary, routine expertise focuses on proficiency and efficiency within familiar tasks, while adaptive expertise emphasises flexibility, creativity and the ability to handle new challenges.

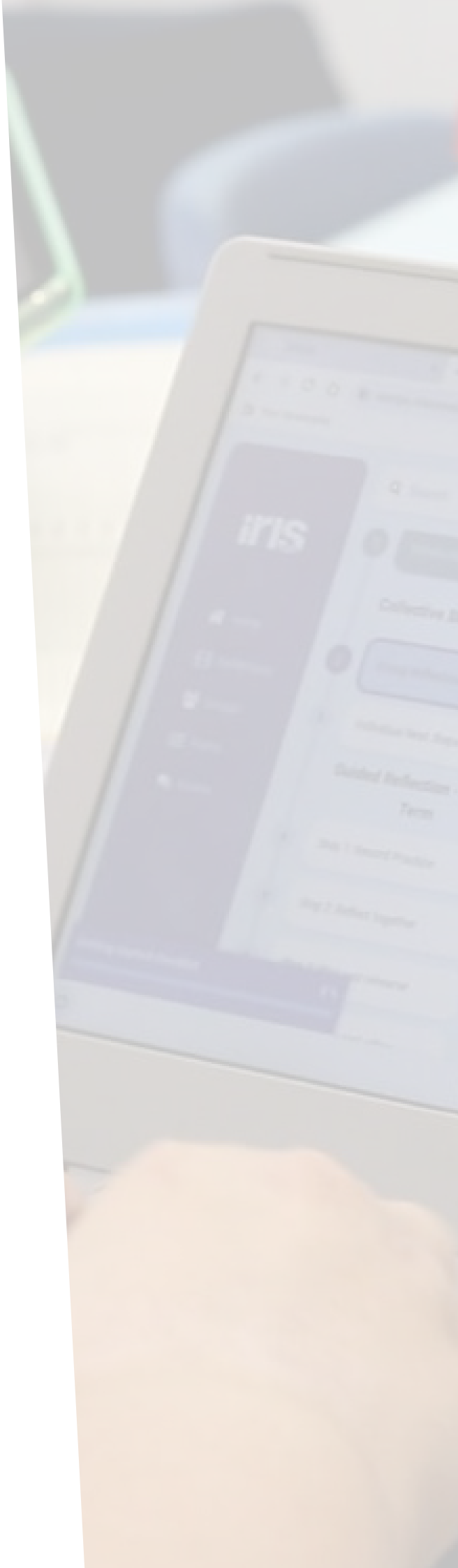
There is no doubt that we want our teachers to be adaptive experts given the dynamic nature of the education landscape. However, it's not clear how this can be fostered if our mechanisms for professional development focus on technique at the expense of teacher agency, reflection and decisional dialogue.

Are all types of instructional coaching effective?

Since Kraft, Blazar and Hogan's seminal study on instructional coaching (2018) and its impact on teaching and learning, many schools have implemented a form of instructional coaching in their PD curriculums. They define instructional coaching as a form of job-embedded, individualised professional development, where a coach works one-on-one with a teacher to improve instructional practices.

Yet, instructional coaching can be a highly contested domain, with varying different approaches and frameworks meaning that one school's approach may differ from another. Some coaching models are more directive than others and focus on the knowledge of techniques (Bambrick-Santoyo, 2016). Whereas, some are more dialogic and based on a partnership model, where coaches ask questions to help a teacher find solutions to their own challenges (Knight, 2017).

Both of these approaches can be incredibly effective when used in the right context. While techniques are obviously very important, often, powerful dialogues about decision-making between a coach and coachee can be omitted due to an over-emphasis on codification of techniques. This is a shame, as situational awareness is also about noticing, evaluating and predicting. Therefore, coaching dialogues need to include this, as it helps the teacher cope with the variation and nuance that comes with the real world application of teaching techniques. Yet, instructional coaching which uses this kind of dialogue can be difficult to scale up, and there are many challenges leaders could face when attempting to implement it effectively.



Scaling challenges

Research (Kraft, Blazar and Hogan, 2018) highlights several conditions that contribute to the effectiveness of instructional coaching:

- **Frequency and intensity:** Coaching programs that offer more frequent sessions with sustained support over time tend to be more effective.
- **Coach expertise:** Coaches who have strong content knowledge and pedagogical skills are better able to guide teachers.
- **Teacher buy-in:** The effectiveness of coaching also depends on teachers' openness to feedback and their willingness to engage in reflective practice.
- **School support:** Coaching is most successful when it is supported by school leadership and aligned with broader school improvement efforts.

However, scaling up a coaching programme which does all of these things in schools can be very difficult. High-quality instructional coaching can be expensive and difficult to scale, as it requires a low coach-to-teacher ratio and significant investment in time and resources.

Effective coaching typically requires a small number of teachers per coach, which can be expensive to sustain. Coaches need time for observations, feedback and planning, making it difficult to scale without a substantial financial investment. Therefore, both coaches and teachers need dedicated time during the school day for coaching activities. Finding this time without disrupting teaching schedules can be challenging, especially in a recruitment and retention crisis where cover budgets are stretched to full capacity.

In schools in England, where instructional coaches are often middle or senior leaders, there is also a limited pool of coaches. Scaling instructional coaching requires a large number of highly skilled coaches, who are not only content experts but also effective at working with adults. Finding enough individuals with the necessary expertise and training is a significant barrier. So too is ensuring the consistency and quality of coaching when expanding programs.

In addition, for coaching to be effective, teachers must be receptive to feedback and willing to reflect and change their practice. In some cases, teachers may resist instructional coaching, either due to past negative experiences with professional development, lack of trust in the coach, or feeling overwhelmed by the additional responsibilities coaching brings. Teachers may also sometimes view coaching as a form of evaluation rather than a supportive, non-judgmental process. This perception can hinder the effectiveness of coaching programs, especially when scaling, if the program is not clearly communicated or positioned within a supportive school culture.

Sustaining long-term impact can also be difficult. Effective coaching often requires ongoing, sustained support rather than one-off interactions. It may take multiple cycles of observation and professional dialogue for the right things to happen, at the right time, for the right reason. Scaling up coaching programs means finding ways to ensure long-term engagement, which can be difficult in the face of budget cuts, shifting priorities, or staff turnover. Teachers and coaches can also experience fatigue if the demands of coaching are too intense or prolonged, without clear breaks or changes in routine. Sustaining enthusiasm and commitment over time becomes harder when coaching is expanded on a larger scale and teachers may feel stretched thin trying to balance multiple professional development demands.

Given these challenges, school leaders may feel compelled to streamline their instructional coaching programmes when implementing them at scale, often by reducing nuance and complexity. Simplifying unnecessary complexity is important (Darling-Hammond et al., 2017), as excessive complexity can diminish the impact of professional development on teaching practices (Desimone and Garet, 2015).

However, oversimplifying can be equally problematic, leading to one-size-fits-all coaching that prioritises diagnosis and instruction over adaptability.

As Jim Knight (2024) points out, effective coaching doesn't withhold expertise; rather, it is shared provisionally, showing openness to the teacher's perspective (Knight, 2011). More directive coaching, the coach can be in danger of "doing the teacher's noticing and thinking for them" by diagnosing and prescribing actions. The consequence can be limited space for teachers to develop the situational awareness and adaptability essential for expert practice.

Such methods also run the risk of adding to the issue of coaching scalability. If the coaching relationship does not effectively cultivate the building blocks of adaptive expertise (noticing and reflection) it risks creating a dependency on coaching, as the only mechanism for adaptation in an ever changing landscape.

Overly directed approaches may also fail to account for the teacher's prior experiences and level of expertise, leading to what is sometimes called the expertise reversal effect (Kalyuga, 2007). This occurs when instructional support that one might employ productively with novices actually increases the cognitive load of learners with greater domain expertise. Further, disregarding, or failing to build upon, existing competencies may not only be a deeply inefficient approach, but also risks devaluing a teacher's experience

Other forms of professional development

There are other modalities of professional development which can be just as effective as instructional coaching and also include many of the mechanisms referred to in the Education Endowment Foundation's research (2021). Critical self-reflection, for example, can also enhance teaching effectiveness. Studies show that teachers who engage in regular, structured self-reflection are more likely to adjust their instructional practices based on classroom observations and student feedback. This process helps them identify ineffective strategies and replace them with more effective ones (Hattie, 2015; Vermunt et al., 2017).

In addition, group coaching can also help teachers rapidly improve. It can be more scalable than 1:1 coaching and focuses on reciprocal teams of teachers who coach each other with a focus on the persistent problems they face in the classroom. Group coaching fosters a collaborative learning environment where teachers can learn from one another. Kraft and Papay (2016) showed that teachers who participated in collaborative professional development, including group coaching, experienced greater improvements in instructional practices compared to those who engaged in individual coaching or isolated professional development. Group coaching can also foster a sense of belonging (Leana, 2016) and improve teacher wellbeing (Cordingley, 2015), leading to better retention rates.

Despite the challenges to scaling up instructional coaching and the other modalities that are also effective for developing teacher expertise, we still think instructional coaching is a great bet. This is why we have developed the IRIS Connect Adaptive Coaching programme to support coaches to develop teachers' expertise.

Our adaptive coaching approach

Coaches and the teachers they coach now have a shared space to engage in the important work of teacher development. IRIS Connect have created a workspace where they can conduct and record all activities related to the teacher's professional development and access the support of the resources on the platform.

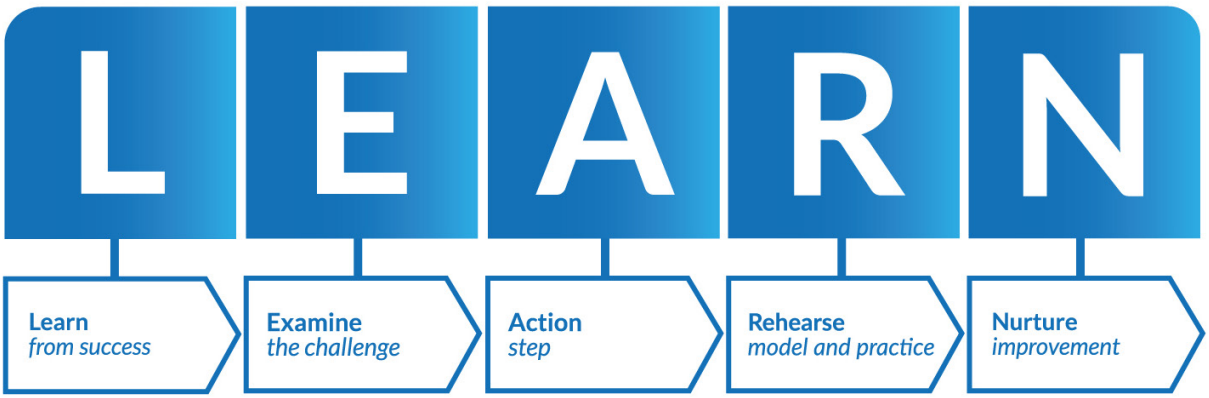
Coaches can contract with their teachers, setting up the relationship productively and setting the times for observation and coaching. They can access coaching pathways which support them to take each step of the coaching process and keep a record they can both return to. The workspace allows the flexibility to start pathways in any area the teacher is developing and populate the pathway with the many resources detailed below.

A key part of the adaptive coaching process is our model of coaching, L.E.A.R.N:

The LEARN model and the accompanying support resources help coaches to develop teachers' thinking and their practice. Here's just a few ways the LEARN model helps:

1. Questions for coaches to use

At each stage of the LEARN model, coaches are supported to ask questions that dig into the teacher's thinking. For example, the first step is 'Learn from success'. This is where the coach supports the teacher to own their success and articulate what they did and why.

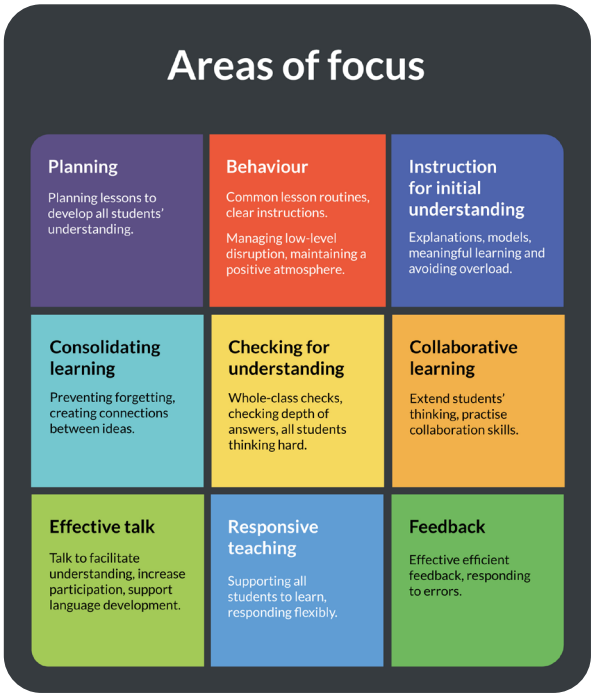


2. Theory guides to build knowledge

Better knowledge helps teachers make better decisions. We have developed theory guides to summarise important evidence about fundamental areas of teaching.

Our Adaptive Coaching Pathway allows for coaches and teachers to pull in these theory guides on important areas of focus in teaching including behaviour, instruction for initial understanding, checking for understanding etc.

An evidence-led and shared understanding of these areas catalyses coaching conversations and helps teachers make better decisions to support student learning. It can also give teachers a strong rationale for their choices, helping them to avoid lethal mutations.

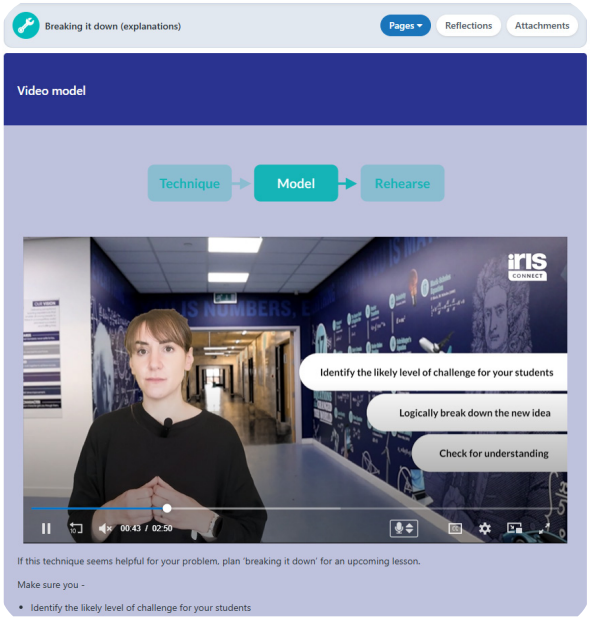


3. Technique guides

IRIS Connect have created a whole host of technique guides that describe and contain a video model of each teaching technique accompanied by key features that we think make the technique effective. These are great for developing teachers' repertoire of techniques once they have examined the problem they are experiencing and set a goal.

The inclusion of key features means the techniques are highly adaptable to the teacher's context without sacrificing what makes the technique work. This allows the teacher (with the coach's support) to innovate and adapt the technique.

But we are not finished. We will be innovating this pathway, making tweaks to better support coaches and teachers.



We have made our Adaptive Coaching Workspace free to all schools. At IRIS Connect, we are committed to helping fight the recruitment and retention crisis and we want to give back to schools by helping leaders implement instructional coaching at scale in their schools.

Your school will only pay for optional upgrades to our Video and AI tools. And, of course, we hope they do!

Video is a hugely powerful tool for teachers. It allows teachers to observe, reflect, and refine their instructional techniques through real-time examples of classroom interactions, which leads to deeper learning and sustained improvement. Baecher et al. (2017) found that teachers who reviewed videos of their own teaching were better able to identify specific strengths and areas for improvement compared to teachers who relied only on memory or peer feedback. Gaudin and Chaliès (2015) concluded that video provides an effective way for teachers to step back and reflect on their practice without the pressure of in-the-moment decision-making, leading to more thoughtful and targeted improvements.

It can be an incredibly useful tool for coaches, as it allows them to give highly specific feedback based on actual classroom footage, which helps teachers link feedback directly to their instructional practices. This specificity makes it easier for teachers to make targeted improvements (Van Es and Sherin, 2016). In addition, scaling and sustaining coaching using IRIS Connect overcomes the barriers of cost when paying for a teacher to be covered, as well as the time constraints coaches often experience. This is because coaches and coachees can access the platform at any time, in any place, at a moment which is convenient for them.

Video also supports peer learning and collaborative reflection, as coaches can use it to deconstruct practice with their coachees, as models which help bridge the gap between knowledge and skills. It can also act as a stimulus for decision making, through simulations. Gary Klein (2014) uses scenarios as a way to help professionals in high-stakes fields like the military to develop decision-making skills by "shadowing" the thought processes of experts. The method allows learners to compare their own decisions with those of experienced practitioners in a given scenario, enhancing their ability to make judgments under pressure. Video is an excellent tool for this as it can provide a realistic scenario for teachers to discuss.

Artificial intelligence can also be a time saver for busy coaches who are juggling multiple responsibilities in school.

Our powerful tool allows videos to be analysed through the lens of one of our insights, such as exploring the cognitive load in lesson explanations.

This provides meaningful data for coaches to discuss in their meetings. We have a number of pre-made insights for schools to use, but schools can also build their own insights focusing on the challenges in their own context.

Our moral purpose

We started this white paper with the assertion that teacher quality is the biggest factor influencing pupil progress.

This is why professional development matters and we truly believe that instructional coaching could be one of the ways professional development can be effective and sustained, as well as making a real difference to teacher's practice. But it needs to be the kind of instructional coaching which gives teachers the agency to improve their own teaching, working alongside a coach and doesn't become a tick-box exercise. Only then can teachers feel empowered and motivated to want to get better, leading to a long career in the classroom.

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