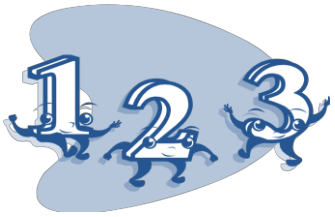
Theories of action for learning and teaching

Using instructional rounds for leading learning

David Hopkins



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Introducing the theories of action for leading learning

Despite having written extensively about the quality of teaching over the years, I have recently had a breakthrough in my thinking about the impact of teaching on learning and the nature of professional development. This has occurred as a consequence of leading a significant number of 'instructional rounds' in Australia and the UK which have involved the extensive study of classroom practice and the subsequent generation of hypotheses about the relationship between learning and teaching and *vice versa*. This handbook - *Theories of Action for leading learning: Using Instructional rounds* - describes this learning and attempts to integrate it into a more comprehensive schema based on my previous work.

I have been helped to understand the nature of this complexity through conversations with Richard Elmore, and through reading the book he has co-authored *Instructional Rounds in Education.* In that book the authors contrast the individualism that too often characterises teaching where the person and the practice are intertwined, with professionals who are those that share a common practice and open it up to public scrutiny. Your practice is an instrument for expressing who you are as a professional; it is not who you are. How we define practice is therefore, critical and Elmore and his colleagues (City *et al.,* 2009)[1] mean something quite specific:

'We mean a set of protocols and processes for observing, analyzing, discussing and understanding instruction that can be used to improve student learning at scale. The practice works because it creates a common discipline and focus among practitioners with a common purpose and set of problems.'

Reference resources

[1] City, E. A., Elmore, R. F., Fiarman, S.E. and Teitel, L. (2009) *Instructional Rounds in Education,* Cambridge, Massachusetts: Harvard Education Press, page 3.

What is a theory of action?

A theory of action is a link between cause and effect i.e. *if* we take a particular action, *then* we expect that behaviour to have specific effects. A theory of action connects the actions of teachers with the consequences of their behaviours – the learning and achievement of their students.

The overarching theory of action is:

When teachers explicitly and consistently incorporate the theories of actions in their own teaching then the learning skills, the spirit of enquiry, and the achievement of our students will be greatly enhanced.

In the pages that follow, each of the theories of action described has emerged from the process of 'instructional rounds' (for details see page 4) recently conducted in schools in both the UK and Australia. It is important to stress that the ten theories of action which provide the guiding framework for this handbook have evolved directly from the collaborative work of participating teachers and school leaders, as they have sought to find even more powerful ways for their students to learn and to become successful.

Constructing the theories of action: the instructional rounds process

The potential of establishing a professional practice as described is the creation of a new culture of teaching and learning. This requires adopting strategies that have the ability to:

- generate a common language of teaching practice
- build the connective tissue by which the learning culture is propagated in and across schools
- focus greater attention on the knowledge and skill requirements of doing the work

The approach adopted to build such a culture of teaching and learning as described in this handbook is through the 'rounds' approach to medical training. This approach is based upon involving networks of teachers and leaders who have agreed to schedule significant and systematic time to explore a problem and develop a practice. The process works like this:

- The network convenes in a school for a rounds visit hosted by a network member/s. The focus is an issue of practice related to teaching and learning that the school would like feedback on.
- The network divides into smaller groups to visit a rotation of six classrooms for approximately 20 minutes each. In each classroom, participants collect descriptive evidence related to the focus of the round.
- After completing the classroom observations, the whole group assembles, working through a process of description, analysis and prediction. They analyse the evidence for patterns and explanations for the observable student performance in the school. They then develop a series of constructs that provide an analytic description of what they have observed. Theories of action for each construct are then developed from this.
- Finally the network provides feedback to the school and teachers involved in the rounds visit. No comments are made about the behaviours of individual teachers; the focus is unrelentingly on describing the practice, how it can be enhanced and lead to the next level of professional work in the school.

This approach enables the knowledge-base of teachers to be used to develop theories of action that discipline the culture of teaching and learning in the school and across the network. As the experience with instructional rounds has continued to deepen through experience in schools in the UK, Australia and elsewhere, five important lessons have been learned:

1. Despite the phase or context of schooling the theories of action were in most cases very similar.
2. This is not a 'pick and mix' approach – all the theories of action have to be integrated into the teacher's professional repertoire if they are to impact in a sustained way on student learning.
3. All the theories of action were characterised by an approach to teaching that has enquiry at its centre.
4. Some of the theories of action relate to the school and some to the practice of individual teachers.
5. All of the theories of action have a high level of empirical support in research literature.

Through the instructional rounds process, an approach based on the ten theories of action (summarised on page 5) - has been developed from the practice of teachers, that if consistently applied, will enhance not just the achievement, but also the skills and confidence of all students.

Using this handbook

The handbook provides a practical guide to each of the ten theories of action described on the following page. It is designed to support their application and implementation by leaders at whole-school level and by teachers working in and beyond the classroom. It aims to provide teachers and leaders of learning with the components of practice, that when taken as a whole will strengthen their leadership and further enhance learning and achievement among their students.

In the sections of the handbook that follow you will find:

- an explanation of the theory of action principles
- a specification and illustrative example of the teacher behaviours involved in practice
- a practical activity that can be used to explore the theory of action in your school or classroom context
- a self-assessment tool for use in evaluating current practice and planning future development in your school

The ten theories of action

Theories of action for the whole school

1. 'When schools and teachers set **high expectations and develop authentic relationships,** then students' confidence and commitment to education increases and the school's ethos and culture deepens.'

2. 'When teacher directed instruction across the school becomes consistently more **enquiry focused,** then the level of student achievement and curiosity increases.'

3. 'By consistently adopting whole-school **protocols for teaching,** student behaviour, engagement and learning is enhanced.'

4. 'By consistently adopting whole-school **protocols for learning**, student capacity to learn, skill level and confidence is enhanced.'

Theories of action for the teacher

5. 'When teachers set **learning intentions** and use appropriate **pace** and have a clear and strong **narrative** about their teaching and curriculum, then students are more secure about their learning, and achievement and understanding is increased.'

6. 'When **learning tasks** are purposeful, clearly defined, differentiated and challenging, then the more powerful, progressive and precise the learning for all students.'

7. 'When teachers systematically use **higher order questioning,** the level of student understanding is deepened and their achievement is increased.'

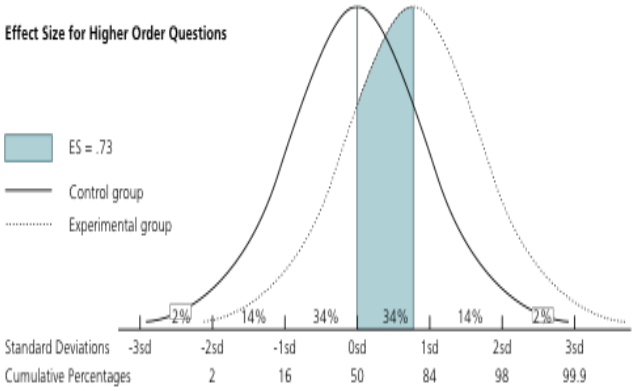
8. 'When teachers consistently use **feedback and data** on student actions and performance, then behaviour becomes more positive and progress accelerates.'

9. 'When **peer assessment and assessment for learning** (AfL) are consistently utilised, student engagement, learning and achievement accelerates.'

10. 'If teachers use **co-operative group structures/techniques** to mediate between whole class instruction and students carrying out tasks, then the academic performance of the whole class will increase as well as the spirit of collaboration and mutual responsibility.'

Theories of action and their effect size

When the individual theories of action are tested against the research evidence, their effectiveness is found to have a strong empirical base. The concept of 'effect size' is used to describe the magnitude of the gains in student learning to be expected from the use of each of the theories of action. Effect size refers to the impact that the 'practice' has on the curve of normal distribution, moving it, as seen below**,** more to the right.



In this instance the figure illustrates the effect size of using higher order questions which in this case it is 0.73. This means that the average student in the 'experimental group' - where the teacher used higher order questions - would be performing at the about the 65th percentile level, compared with the 50th percentile level in the 'control group' where the teacher was using closed questions.

John Hattie[2] in his book *Visible Learning* has computed the effect size for over 800 influences on student learning. His work will be used to assess the impact of the ten theories of action described in the following sections of this handbook. The effect size will be presented alongside illustrative references to each of the theories of action detailed in the pages that follow.

Reference resources

[2] Hattie, J. (2009) *Visible Learning*, Oxford, UK: Routledge.

Prioritising high expectations and authentic relationships

Theory of action for the whole school

Theory of action principle

*'When schools and teachers set **high expectations and develop authentic relationships,** then students' confidence and commitment to education increases and the school's ethos and culture deepens.'*

In principle...

A supportive, rigorous and optimistic learning environment is fundamental to high levels of student achievement, as is teachers' ability to create and sustain authentic relationships with their students. For example, the teacher 'who made a difference' is a common topic of conversation on admission that 'I am a teacher'. The influence of expectations is often a subtle one and is felt in a myriad of classroom interactions. When positive, it implies establishing the school as a safe and secure learning environment in which pupils can expect acceptance, respect and even warmth from their teachers, without having to earn these - they are intrinsic rights that are extended to all pupils, without prejudice, simply because they are there.

In practice...

In *Looking in Classrooms*[3] a model is proposed to explain teacher expectation effects:

- Early in the year, the teacher forms differential expectations for student behaviour and achievement.
- Consistent with these differential expectations, the teacher behaves differently towards different students.
- This treatment tells the students how they are expected to behave in the classroom and perform in academic tasks.
- If the teacher's treatment is consistent over time, it will likely affect the student's self-concept, achievement motivation, levels of aspiration, classroom conduct and interactions with the teacher.
- These effects will complement and reinforce the teacher's expectation.
- Ultimately, this will affect achievement and other student outcomes. High-expectation students will be led to achieve at or near their potential, but low-expectation students will not gain as much as they could have if taught differently.

In school...practice example

"A particular focus of our work has been to provide opportunities for teachers to demonstrate high expectations and commitment to learners through participation in community-based or extra-curricular activities.

A pre-requisite for success lies in the teacher's ability to sustain authentic relationships with learners. Teachers make every effort to ensure that when tasks are set, or feedback given, they provide a model of behaviour that consistently conditions student behaviour.

The foundation of this model is based on a willingness to provide praise and positive encouragement. This foundation creates a dynamic relationship that enables 'hard conversations' that set the tone of challenge, intrinsic to moving learners forward.

The school has created a demanding, yet safe and secure learning environment that has seen a significant increase in levels of attendance and an equally significant decrease in rates of exclusion."

On reflection...

How can self-evaluation and monitoring data be used effectively to raise expectations of learners in your school?

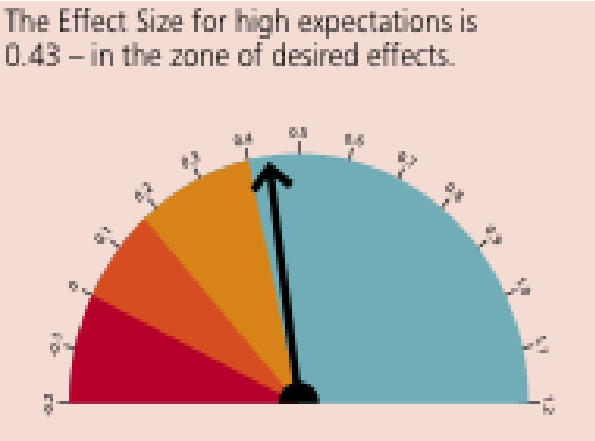
Reference resources

[3] Good, T. and Brophy, J. (2008) *Looking in Classrooms* (Tenth Edition), Boston, MA: Allyn and Bacon, page 51.

In action...

The power of teacher expectations can be both positive and negative. Yet if the teacher is to stimulate curiosity the effect must emphatically be in the positive direction. Unfortunately, it seems that many teachers are unaware of the cues that they are giving and of the cumulative impact these, often subtle, but over time extremely important, attitudes and behaviours have on their students. The framework below, taken from *Looking in Classrooms*[4], provides a way of understanding the dynamics involved.

Effect size: High expectations



Communicating high and low expectations through teaching practice

The final column provides space for you to make general notes about how you convey expectations through your teaching practice.

Task Environment	Tendencies in teaching practice for students believed to be more capable	Tendencies in teaching practice for students believed to be less capable	Reflections on my practice How do I tend to convey expectations about capability?
Curriculum **Procedures** **Task definition** **Pacing** **Quality of environment**	More opportunity to perform publicly on meaningful tasks	Less opportunity to perform publicly, especially on meaningful tasks	
	For example, supplying alternative endings to a story versus learning to pronounce a word correctly		
	More opportunity to think and to analyse	Less opportunity to think and to analyse (This often occurs because much work is aimed at practice)	
Group practices	More tasks that deal with comprehension, understanding (Tasks are often completed in higher ability groups)	Less choice on curriculum assignments (This occurs because there is greater focus on drill like tasks)	
Locus of responsibility	More autonomy (This is sometimes characterised by more choice in tasks, and by fewer teacher interruptions)	Less autonomy (This is sometimes characterised by frequent teacher monitoring of work, and frequent teacher interruptions)	
Feedback practice **Evaluation practice**	More opportunity for self-evaluation	Less opportunity for self-evaluation	
Motivational strategies	More honest feedback More contingent feedback	Less honest feedback Less contingent feedback More gratuitous feedback	
Quality of teacher-student relationships	More respect for the learner as an individual with unique interests and needs	Less respect for the learner as an individual with unique interests and needs	

Reference resources

[4] Good, T. and Brophy, J. (2008) *Looking in Classrooms* (Tenth Edition), Boston, MA: Allyn and Bacon, page 58.

Reflection for action...Use the framework provided above as a stimulus for professional discussion on teacher expectations in your school.

Self-assessment: Expectations and relationships in your school...

Theory of action	Self-assessment: Whole school	*Use the space provided to tick the box that applies to you*		
Expectations and relationships When schools and teachers set **high expectations and develop authentic relationships,** then students' confidence and commitment to education increases and the school's ethos and culture deepens.	**No systematic whole school adoption**	**Limited systematic whole school adoption**	**Some systematic whole school adoption & review**	**Systematic whole school adoption & review**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Emphasising enquiry focused teaching

Theory of action for the whole school

Theory of action principle

*'When teacher directed instruction across the school becomes consistently more **enquiry focused,** then the level of student achievement and curiosity increases.'*

In principle...

In this theory of action, enquiry focused teaching is seen as both an approach and a philosophy – developing a spirit of enquiry as well as a precise strategy. When schools adopt an approach to teaching focused on developing curiosity and enquiry on the part of their students rather than simply the acquisition of curriculum knowledge, they need to develop their own *definitions of classroom practice* to underpin this shift in emphasis.

One definition of the practice of teaching and learning is presented in *Models of Learning, Tools for Teaching*[5]: *'Learning experiences are composed of content, process and social climate. As teachers we create for and with our children, opportunities to explore and build important areas of knowledge, develop powerful tools for learning, and live in humanizing social conditions.'*

In practice...

In exploring the practice of enquiry focused teaching, Hattie[6] provides this definition:

'Enquiry based teaching is the art of developing challenging situations in which students are asked to observe and question phenomena; pose explanations of what they observe; devise and conduct experiments in which data are collected to support or contradict their theories; analyze data; draw conclusions; design and build models; or any combination of these.'

Although this is both a precise and accurate specification of enquiry teaching, the approach to practice described in this handbook embraces a broader perspective that also includes direct and active teaching (as described in the next theory of action) as well as a high degree of 'scaffolding'.

In school...practice example

"A strong emphasis is placed on improving pupils' skills and ensuring that these skills are applied across the curriculum. Staff plan effectively to ensure that there is comprehensive coverage of skills and create lessons that challenge pupils and children are given open-ended opportunities to learn.

The use of 'Building Learning Power' assists this approach, emphasising the importance of - resilience, resourcefulness, reciprocity and reflectiveness - the skills required for life-long learning. The use of 'Pupil Skills Profiles' empowers the children to assess their own progress and recognise the next steps in their individual learning.

A culture of sharing best practice has been fostered, in the form of 'triad learning'. Providing staff with opportunities to observe, support and reflect on their own and others' teaching, has proven to be extremely beneficial and raised expectations towards enquiry-focused teaching."

On reflection...

How can enquiry focused teaching be developed to increase the level of curiosity and student achievement in your school?

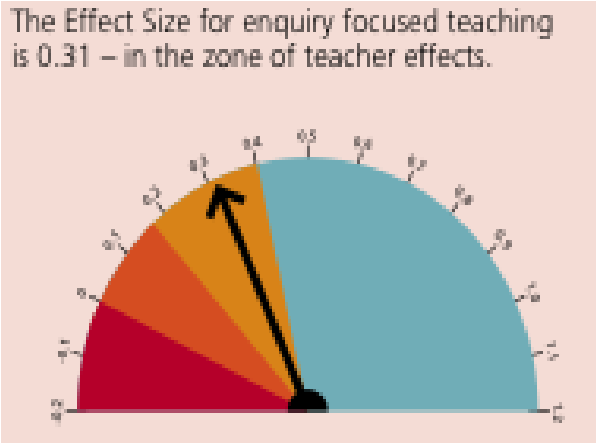
Reference resources

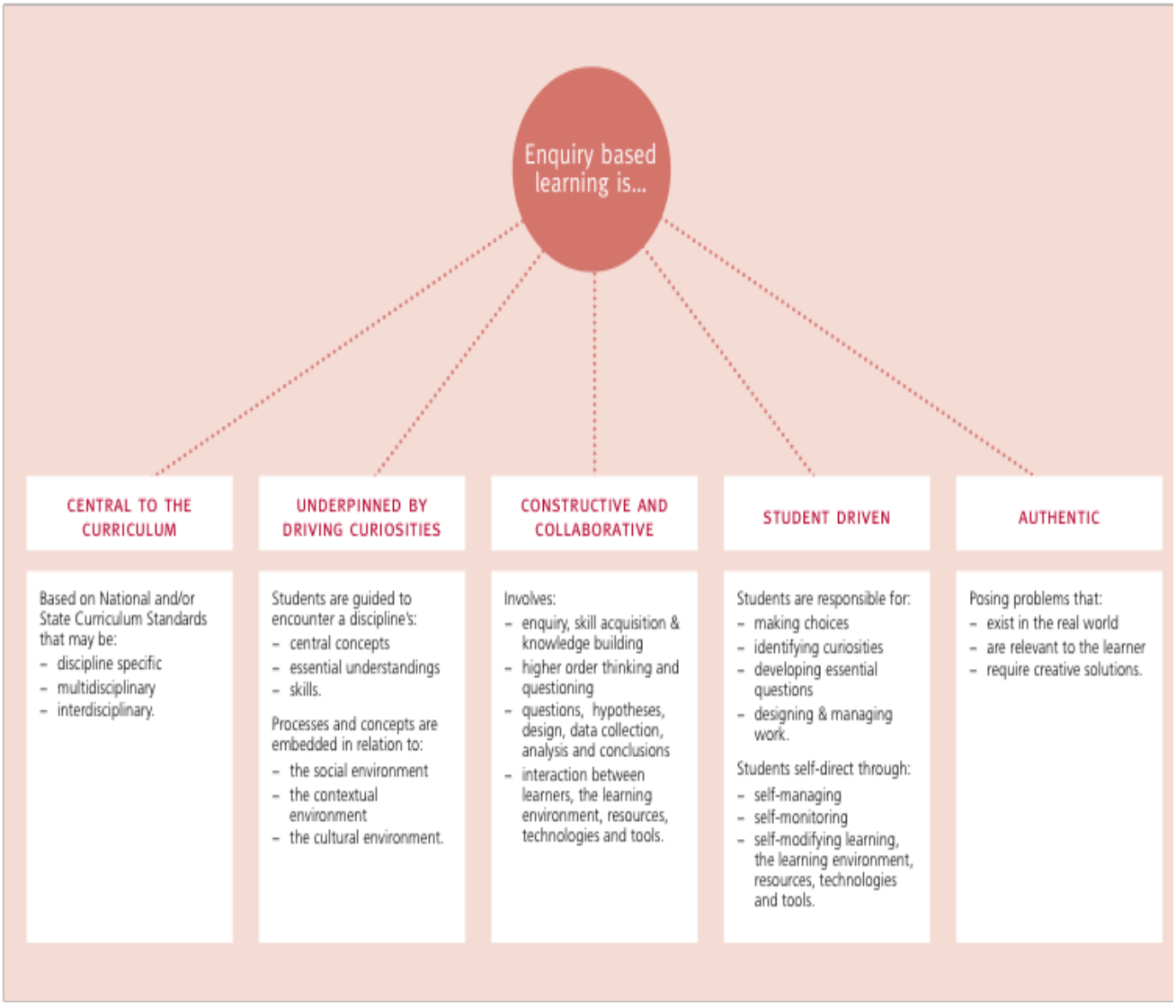
[5] Joyce, B. R., Calhoun, E. F. and Hopkins, D. (2009) *Models of Learning – Tools for Teaching (Third Edition)*, Maidenhead, Berks, UK: Open University Press/ McGraw-Hill Education. [6] Hattie, J. (2009) *Visible Learning*, Oxford, UK: Routledge, page 208.

In action...

For the school's definition of practice for enquiry focused teaching to have real effect, it must be reflected in a shared language and implemented through strategies that provide a guide to action both in the classroom and across the school. The schema below – developed by Rachael Smith at The Lakes P–9 School, Northern Metropolitan Region, Victoria, Australia - outlines some of the basic elements of enquiry-based learning that have proven to be useful to schools in comparing, contrasting and constructing their own definitions of practice.

Effect size: Enquiry focused teaching





Reflection for action...Analyse the schema above and compare and contrast it with the approach to enquiry focused learning in your school.

Self-assessment: Enquiry focused teaching in your school...

Theory of action	Self-assessment: Whole school			*Use the space provided to tick the box that applies to you*
Enquiry focused teaching When teacher directed instruction across the school becomes consistently more **enquiry focused,** then the level of student achievement and curiosity increases.	**No systematic whole school adoption**	**Limited systematic whole school adoption**	**Some systematic whole school adoption & review**	**Systematic whole school adoption & review**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Adopting consistent teaching protocols

Theory of action for the whole school

Theory of action principle

*'By consistently adopting whole-school **protocols for teaching,** student behaviour, engagement and learning is enhanced.'*

In principle...

Convention regards teaching as an individual achievement. The weakness of this approach is that even when practice is individually excellent, it is implicit and often unarticulated. This means it can't be shared with the whole school, making it difficult for a consistent learning culture or ethos to be created and sustained. Teaching protocols are guidelines for observing, analysing, discussing and understanding teaching that can be used to improve student learning. Taken together they create an explicit professional practice within a school that creates a common discipline and focus among educators with an agreed purpose and approach.

In practice...

In this handbook we refer to two main types of teaching protocols. The first are used to build competence in what we call teaching tactics or skills; these are the individual teacher behaviours that make up the individual elements of a lesson, such as questioning and providing feedback.

The second are the protocols related to teaching models: a teaching model simultaneously defines the nature of the content, the learning strategies, and the arrangements for social interaction that create the learning environments of students.

Each model is designed to bring about particular kinds of learning and to help students become more effective learners. The inductive teaching model, described overleaf, is one such example of a model of teaching.

Models of teaching are also models of learning. How we teach has a large impact on our students' abilities to educate themselves. A teaching model provides the scaffolding we can use to expand this ability. The most powerful curricular and teaching patterns induce students to construct knowledge – to inquire into subject areas intensively. The result is to increase student capacity to learn and work smarter.

In school...practice example

"Our first 'instructional round' focused on effective teaching protocols. When synthesising our findings, a number of common threads appeared:

1. There was a consistent 'narrative' evident in the teaching and learning throughout the school, with learning intentions clearly shared, leading to learner engagement.

2. Planning was thorough and support-staff were deployed to ensure that work was differentiated and purposeful.

3. There was systematic use of effective questioning techniques, with examples of probing, open questioning stimulating learners' curiosity.

4. Feedback was effectively used in conjunction with *Assessment for Learning* strategies, leading to focused target-setting.

5. Co-operative group structures were evident in lessons, fostering a spirit of mutual responsibility for learning, with problem-solving challenges enhancing the children's critical thinking skills."

On reflection...

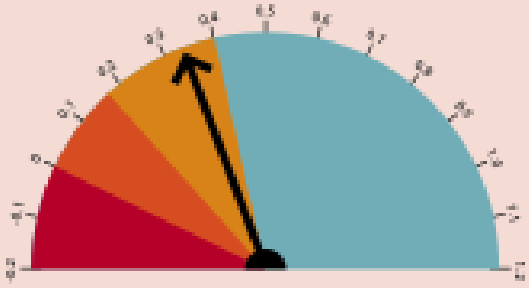
How can consistent teaching protocols be established to enhance student learning, engagement and behaviour in your school?

In action...

The inductive model of teaching is a more precise form of inquiry teaching. The teaching protocols consist of a number of discrete phases that cannot be rushed or omitted. Inductive inquiries are rarely brief because the very nature of the inquiry requires students to think deeply. Put simply, the inductive model involves the collecting and sifting of information in order to construct categories, or labels. This process requires students to engage with the data and seek to produce categories in which to allocate the data. It requires students then to generate hypotheses based upon this allocation and to test out these hypotheses by using them to guide subsequent work.

Effect size: Inductive teaching

The Effect Size for inductive teaching is 0.33 – in the zone of teacher effects.



Syntax of the Inductive Model of Teaching

Phase		Peer observation notes
Phase One: **Identify the Curriculum Content**	– Establish the focus and boundaries of the initial inquiry. – Clarify the long-term objectives.	
Phase Two: **Collect, Present and Enumerate Information Related to the Inquiry**	– Assemble and present the initial information as a data set. – Enumerate and label the items of data.	
Phase Three: **Examine Data**	– Thoroughly study the items in the data set and identify their attributes.	
Phase Four: **Form concepts by classifying**	– Classify the items in the data set and share the results. – Add data to the set. – Reclassification occurs, possibly many times.	
Phase Five: **Generate and Test Hypotheses**	– Examine the implications of differences between categories. – Classify categories, as appropriate. – Reclassify in two-way matrices, as well as by correlations, as appropriate.	
Phase Six: **Consolidate and Transfer**	– Search for additional items of data in resource material. – Synthesize by writing about the domain, using the categories. – Convert categories into skills. – Test and consolidate skills through practice and application.	

Reference resources

Inductive Model of Teaching: Peer Coaching Guide in Joyce, B. R., Calhoun, E. F. and Hopkins, D. (2009) *Models of Learning – Tools for Teaching (Third Edition)*, Maidenhead, Berks, UK: Open University Press/McGraw-Hill Education.

Reflection for action...Use the syntax schedule above as a peer coaching guide to explore the protocols of inductive teaching in your school.

Self-assessment: Teaching protocols in your school...

Theory of action	Self-assessment: Whole school	*Use the space provided to tick the box that applies to you*		
Teaching protocols By consistently adopting whole-school **protocols for teaching,** student behaviour, engagement and learning is enhanced.	**No systematic whole school adoption**	**Limited systematic whole school adoption**	**Some systematic whole school adoption & review**	**Systematic whole school adoption & review**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Adopting consistent learning protocols

Theory of action for the whole school

Theory of action principle

*'By consistently adopting whole-school **protocols for learning**, student capacity to learn, skill level and confidence is enhanced.'*

In principle...

The purpose of education is to help students acquire useful and important bodies of knowledge whilst at the same time, helping them become more powerful learners. Powerful learning refers to the ability of learners to respond successfully to the tasks that they are set, as well as the tasks they set themselves. This ability comprises the capacities to:

- integrate prior and new knowledge
- acquire and use a range of learning skills
- solve problems individually and in groups
- think carefully about their successes and failures
- evaluate conflicting evidence and to think critically
- accept that learning involves uncertainty and difficulty

The deployment of such a range of learning strategies is commonly termed meta-cognition, which can be regarded as the learner's ability to take control over their own learning processes.

In practice...

When learning strategies and their purposes are clear and accessible to all students, they are better positioned to become powerful learners. Central to the achievement of this goal is the development of a consistent, whole-school approach to learning. This involves a number of steps:

- Develop a policy on learning for the whole school through discussion with staff, school governors and parents/carers.
- Then identify the key learning skills you wish the students in your school to acquire and give these skills a prominent place in everything the school does – see them as a student entitlement.
- Promote the specific skills that students need to acquire, display these prominently in classrooms and ensure their consistent use across the curriculum.
- Regularly encourage students to self-assess and reflect on their progress towards achieving mastery in this range learning skills.

In school...practice example

"By focusing on effective learning protocols in the school we found that there was a strong emphasis on learners developing their natural curiosity, conducting inquiry and research, and showing independence in learning.

Problem-solving challenges enhanced the children's critical thinking skills. Groups were asked to exercise initiative while approaching quite complex problems (particularly in upper Key Stage 2). Collaborative learning featured prominently, with children working in pairs and small groups able to communicate effectively and willingly within this structure. This also enabled learners to take on-board, and evaluate, a range of view-points within the group dynamic.

There was a clear and definite reflective element to the learning, where the children were asked to give thoughtful consideration to their own learning experience and assess strengths and limitations in order to support their personal development."

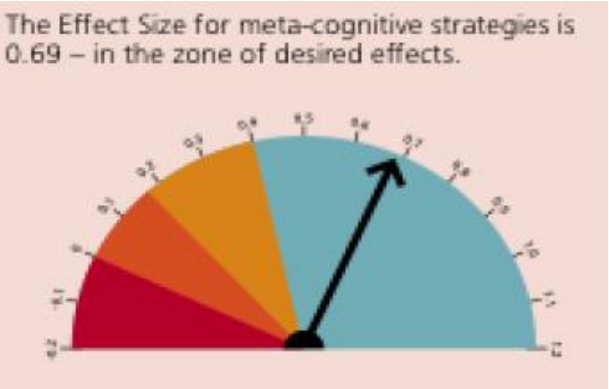
On reflection...

How can learning protocols be made accessible to *all* students in order to enhance their skill level, confidence and capacity to learn in your school?

In action...

Dallam School in Cumbria has recently become the UK's first *Adventure Learning School* and takes the learning of its student very seriously. Dallam is also an International Baccalaureate (IB) secondary school. As a result, they have used the IB learner profile as a basis of developing an approach to learning skills and dispositions throughout the school. They begin in Year Seven and immediately introduce students to the 'Adventure Learning Wheel' that reflects the IB profile. The students self-assess against the Wheel and they and their teachers refer to it regularly as they reflect on progress.

Effect size: Meta-cognitive strategies



The IB Learner Profile

The aim of all IB programmes is to develop internationally minded people who, recognising their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners strive to be...		Are these capabilities relevant for our students? If so, are they reflected in our learning protocols?
Inquirers	– They develop their natural curiosity. – They acquire the skills necessary to conduct inquiry and research and show independence in learning. – They actively enjoy learning – this love of learning will be sustained throughout their lives.	
Knowledgeable	– They explore concepts, ideas and issues that have local and global significance. – In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.	
Thinkers	– They exercise initiative. – Through applying thinking skills critically and creatively, they can recognise and approach complex problems. – They make reasoned, ethical decisions.	
Communicators	– They understand and express ideas and information confidently and creatively, in more than one language and in a variety of modes of communication. – They work effectively and willingly in collaboration with others.	
Principled	– They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. – They take responsibility for their own actions and the consequences that accompany them.	
Open-minded	– They understand and appreciate their own cultures and personal histories. – They are open to the perspectives, values and traditions of other individuals and communities. – They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.	
Caring	– They show empathy, compassion and respect towards the needs and feelings of others. – They have a personal commitment to service. – They act to make a positive difference to the lives of others and to the environment.	
Risk-takers	– They approach unfamiliar situations and uncertainty with courage and forethought. – They have the independence of spirit to explore new roles, ideas and strategies. – They are brave and articulate in defending their beliefs.	
Balanced	– They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.	
Reflective	– They give thoughtful consideration to their own learning and experience. – They are able to assess and understand their strengths and limitations in order to support their learning and personal development.	

Reference resources

The Adventure Learning Schools Handbook (2011), Cumbria: Adventure Learning Schools - accessed at www.adventurelearningschools.org

Reflection for action...Use the learner profile above to assess the strengths and weaknesses of the learning protocols in your school.

Self-assessment: Learning protocols in your school...

Theory of action	Self-assessment: Whole school			*Use the space provided to tick the box that applies to you*
Learning protocols By consistently adopting whole-school **protocols for learning**, student capacity to learn, skill level and confidence is enhanced.	**No systematic whole school adoption**	**Limited systematic whole school adoption**	**Some systematic whole school adoption & review**	**Systematic whole school adoption & review**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Harnessing learning intentions, narrative and pace

Theory of action for the teacher

Theory of action principle

*'When teachers set **learning intentions** and use appropriate **pace** and have a clear and strong **narrative** about their teaching and curriculum, then students are more secure about their learning, and achievement and understanding is increased.'*

In principle...

It has become very clear from the instructional rounds conducted in both Australia and Wales that when teachers are clear about their learning intentions then the students become more engaged and feel more secure in their learning. But it is about more than just setting a learning intention or goal; importantly it is also about linking the intention to the learning outcome and success criteria for the lesson, as well as ensuring curricula progression. This becomes the basis for the narrative of the lesson. Teachers with a strong sense of narrative are able to engage with deviation, knowing how to bring the discussion back on track. Pace is also necessary to keep the lesson lively and through increasing tempo, deal with potential low-level disruption.

In practice...

A learning intention for a lesson or series of lessons is a statement that describes clearly what the teacher wants the student to – know, understand and be able to do as a result of the learning and teaching activity.

In formulating the learning intention it is essential to consider three components:

1. An action word that identifies the performance to be demonstrated.
2. A learning statement that specifies what learning will be demonstrated.
3. A broad statement of the criterion or minimum standard for acceptable performance e.g. 'By the end of the lesson you will be able to describe foundation concepts and questions in…'

In school...practice example

"We have recognised that when learning intentions are shared with learners the learning is enhanced and becomes more focused. The learning intentions are shared orally or visually in a language that learners understand and are revisited at the end of the lesson to enable the teacher and learners assess how the learning has progressed.

The learning intention is closely linked to the learning outcome and success criteria of the lesson, which clarifies expectations and enables learners to feel more secure in their learning. Learners are involved in identifying the success criteria giving them ownership of their learning.

Lessons are paced to maximise pupils' interest and progress. A rapid, exciting and often novel start to a lesson grabs attention, stimulates enthusiasm, and promotes thinking and engagement. A lesson that is well-paced limits opportunities for disruptive behaviour.

Teachers have a strong sense of narrative and are confident in their ability to adjust, adapt and amend the course of the lesson as it progresses."

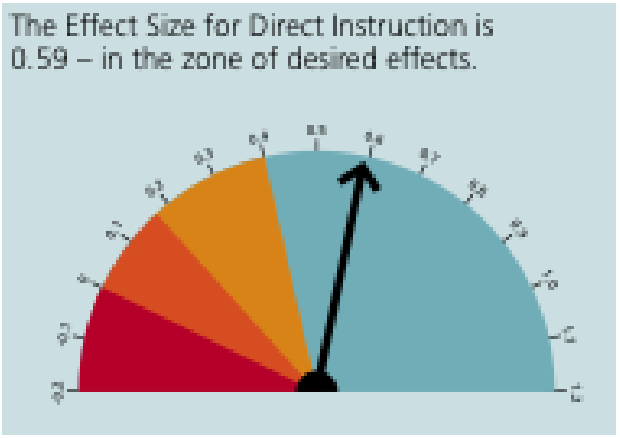
On reflection...

How can teachers' planning for learning effectively embrace explicit learning intentions, narrative and pace in lessons in your school?

In action...

The Explicit Instructional Model adopted by Hume Central Secondary School, Melbourne is based closely on the Direct Instruction model of teaching. This is one of the most widely used approaches to teaching, but in practice often leads to lessons that are dominated by teacher talk. By carefully specifying the phases of the model, teachers in Hume ensure that they achieve the correct balance between teacher instruction and student activity all within a clear set of learning intentions. The teacher led phases of the lesson reflect significant planning between the staff involved to give a common platform for teaching.

Effect size: Direct instruction



Explicit Instructional Model – Hume Central Secondary College

Phase Of Lesson		Essential Elements	Plan
Beginning Of Lesson	THE HOOK Grab students attention and put them in a receptive frame of mind 1-5 minutes	– Stimulate interest and curiosity (for example, by using visuals) – Present a purpose for learning – Connect learning to real world experiences – Foster positive relations with and between students	How will you hook your students into the lesson?
	LEARNING INTENTIONS Make the LEARNING INTENTIONS and SUCCESS CRITERIA clear to students 2-5 minutes	– Use student friendly language – Establish learning goals: write them on board or display on screen – Make assessment and performance requirements clear ('At the end of this lesson, you will know/be able to do/have done …') – Show examples, or models, of EXPECTED student performance (like an excellent sample of work by a student in a previous year)	What are your learning intentions and success criteria, in student friendly language?
	ACTIVATE/REVIEW Activate prior knowledge and review relevant prior learning 5-10 minutes	– Opportunities for students to demonstrate their current level of understanding through verbal and non-verbal means – Review/connect to prior learning – Use questioning techniques – Brainstorm – Key words elicited/taught/displayed	How will you activate prior knowledge and review relevant prior learning?
Presentation	TEACHER INPUT Explicitly teach the CONCEPT	– Provide clear explanation, definition or rule (short, sharp, shiny!) – Provide examples and non-examples – Uses students' previous experiences as basis for explaining concepts – Information presented visually, and/or concrete examples – Concept represented in multiple ways – Explicit teaching of vocabulary OR quick review of relevant vocabulary previously taught	How will you teach the concept?
	TEACHER INPUT Explicitly teach and model the SKILL	– Steps provided as a scaffold – Examples provided – Information presented visually – Reveal your inner thought processes to students – modelling – Modelling short and purposeful	How will you teach the skill? What are the steps?
	CHECK FOR UNDERSTANDING Monitor whether students have 'got it' before proceeding If not, the concept or skill should be re-taught before guided practice begins	– Well-distributed questioning/checking for understanding – Wait time – Higher level questions – Asks for justification (evidence) and clarification from students – Adjustments made due to feedback if needed – Challenge misconceptions – Have students paraphrase and summarise	How will you check for understanding?
Guided Practice	DEVELOPMENT AND ENGAGEMENT Develop student understanding of the concept or skill through activities or exercises	– Tasks, activities or exercises provide well scaffolded opportunity for students to apply the knowledge or skill – Clear instructions, clear timeframe, clear expectations – Range of tasks that appeal to different learning styles and ability levels (rotating tasks at times) – Effective use of elearning tools and programs	What activities or tasks will you ask students to undertake?
	FEEDBACK & INDIVIDUAL SUPPORT Move around the room to determine the level of mastery, and to provide feedback and individual support as needed	– Teacher identifies students needing additional support/guided practice – Teacher moves around the room – Teacher provides comments/written feedback on work	Which students do you anticipate will need additional support? How will you provide it?
Independent Practice	APPLICATION Ask your students to apply the concept or skill in different contexts	– May happen within the same lesson, or in future lesson – Must occur on a repeating schedule so that the learning is not forgotten – May be homework, or individual or group work in class – Teacher makes connections – explains how this knowledge/skill can be applied/transferred to other learning contexts	What independent practice will students undertake?
Review	REVIEW Bring the lesson presentation to an appropriate conclusion by reviewing and clarifying the key points, tying them together in a coherent whole	– Reinforce major points of lesson – Students give feedback on what and how they've learned	How will you review the lesson?

Reflection for action...Use the model matrix above as a template to reflect on the approach to planning and teaching lessons in your school.

Self-assessment: Learning intentions, narrative and pace in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Learning intentions, narrative & pace When teachers set **learning intentions** and use appropriate **pace** and have a clear and strong **narrative** about their teaching and curriculum, then students are more secure about their learning, and achievement and understanding is increased.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Setting challenging learning tasks

Theory of action for the teacher

Theory of action principle

*When **learning tasks** are purposeful, clearly defined, differentiated and challenging then the more powerful, progressive and precise the learning for all students.*

In principle...

In most of the instructional rounds conducted in Australia and Wales, we found that by and large, most students did not find the tasks they are set very challenging. Yet it is the tasks that students do that predict their performance. It is not what teachers think they have asked students to do, nor what the prescribed curriculum says they should be doing, but what students are actually doing and the sense they make of it that is fundamental. This requires setting tasks that are within the student's 'zone of proximal development' if their learning is to progress. This requires that teachers differentiate the tasks that they set their students. Usually, this involves having three/four 'graded tasks' available for each group with scaffolding around the task to ensure success.

In practice...

In *Looking in Classrooms*[6] the following six components are seen to provide the scaffolding for supporting students in carrying out tasks effectively:

1. Develop student interest in accomplishing the intended goal of the task.
2. Demonstrate an idealised version of the actions to be performed.
3. Simplify the task by reducing the steps.
4. Control frustration and risk.
5. Provide feedback that identifies the critical features of discrepancies between what has been produced and what is required.
6. Motivate and direct the student's activity to maintain continuous pursuit of the goal.

Closely associated with scaffolding is the *gradual transfer of responsibility for managing learning.* As students develop expertise they begin to assume responsibility for regulating their own learning, by asking questions and by working on increasingly complex tasks with increasing degrees of autonomy.

In school...practice example

"Using the *TASC* wheel as scaffolding for challenging tasks in Year 7 Science - pupils study Ecosystems. After learning about habitats and how animals adapt to them, pupils are given a task to complete using the *TASC* wheel. Each group receives a photograph of a habitat and is asked to create an animal suitable for that habitat. They begin by collating previous knowledge and researching the habitat. They then choose characteristics that would be suitable for animals in their habitat. This activity is differentiated – for the less able pupils, tables are provided noting characteristics and they are given cards for each. More able pupils have to select the characteristics they believe are important.

The development of the task involves pupils in creating a 3D model of their animal, presenting these to the class, and explaining why they have chosen particular characteristics. Finally, they evaluate the skills they have developed in completing the task."

On reflection...

How can differentiated teaching strategies be used to create more challenging learning tasks in your school?

Reference resources

[6] Good, T. and Brophy, J. (2008) *Looking in Classrooms* (Tenth Edition), Boston, MA: Allyn and Bacon, page 343 & page 344.

In action...

The Banyule Network in the Northern Metropolitan Region, Victoria, has developed an evaluation schedule for teachers to evaluate the tasks they set their students.

- The teacher has formulated a learning intention that includes a specific statement about what students are required to make, say, do, or write.
- A task is set by the teacher, or negotiated with students, that will produce the specified learning intention.
- To assist in task completion, the teacher lets the students know what the task will look like when completed i.e. students will know what they are expected to do, how they are expected to do it, and what knowledge and skills they need to learn.

Effect size: Challenging learning tasks

As Looking in Classrooms observes: 'Only limited research is available on activities and assignments, even though students often spend half or more of their time in school working independently.'

Consequently, there is no effect size to share for this theory of action.

Evaluation Schedule – Banyule Network When you observe practice that accords with an item in the columns below, tick the box beside that item.

Accomplished	✓	Effective	✓	Emerging	✓	No tasks are set
Clear tasks are set to enhance learning. Tasks are negotiated with students		Clear tasks are set to enhance learning		Tasks are set to enhance learning		Or if tasks are set, they are: – inappropriate to either the previous learning or to the development of most of the students – not clearly explained and the students are confused about what or how to complete the tasks. There is little or no attempt to monitor student progress or obtain student feedback about progress.
Connections to the learning intention are explicitly communicated		Connections to the learning intention are explicitly communicated		Student progress through the task is monitored		
Tasks are based on previous lessons		Tasks are based on previous lessons		Tasks are based on previous lessons		
The levels of challenge in the tasks are appropriate to the Zone of Proximal Development of each student		The levels of challenge in the tasks are appropriate to the Zone of Proximal Development of each student		The levels of challenge in the tasks are appropriate to most students		
The tasks are interesting and engaging for students		The tasks are interesting and engaging for students		The tasks are interesting and engaging for students		
The tasks are open-ended and allow for extension		The tasks are open-ended and allow for extension		The tasks are open-ended and allow for extension		
The tasks require some higher order thinking (applying, analysing, evaluating, creating)		The tasks require some higher order thinking (applying, analysing, evaluating, creating)		The tasks require some higher order thinking (applying, analysing, evaluating, creating)		
Instructions on how to complete the task are clear and concise. Students have seen and discussed a version of the task before they work on it		Instructions on how to complete the task are clear and concise		Instructions on how to complete the task are clear and concise		
Student progress through the task is monitored		Student progress through the task is monitored		Student progress through the task is monitored		
Students are able to describe the requirements of the task and how it is connected to the learning intention						
Students draw explicitly on prior knowledge to complete the task						
Students work individually and in groups to complete the task		Students work individually and in groups to complete the task				
Students know how the tasks are based on previous learnings and what they have learned from the previous work						

Reflection for action...Use the evaluation schedule above for peer observation and/or for teacher discussion about learning tasks in your school.

Self-assessment: Setting challenging learning tasks in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Challenging learning tasks When **learning tasks** are purposeful, clearly defined, differentiated and challenging, then the more powerful, progressive and precise the learning for all students.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Framing higher order questions

Theory of action for the teacher

Theory of action principle

*'When teachers systematically use **higher order questioning,** the level of student understanding is deepened and their achievement is increased.'*

In principle...

Research tells us[8] that questioning is the second most prevalent teaching method, after teacher talk. Most teachers spend between 35% and 50% of their time in questioning. Questioning has a positive impact on student learning – but this effect is associated more with higher order questioning which promotes higher order thinking and curiosity. The evidence suggests that most teachers ask low-level questions, related more to knowledge acquisition and comprehension. Research studies[9] suggest that 60% of teachers' questions recall facts and 20% are procedural in nature.

In practice...

Bloom's taxonomy[10] of learning objectives is widely used as a basis for structuring questions particularly higher order questions:

- **knowledge** – recall previous material learned
- **comprehension** – demonstrate understanding of facts and ideas
- **application** – solve problems by applying knowledge, facts and skills learnt in different ways and situations
- **analysis** – examine information and break into parts, make connections and support ideas/arguments
- **evaluation** – present judgements, recommendations and opinions
- **synthesis** – compile information in different, more creative ways, choose other solutions

The following sequence works well:

- frame a question to the whole class
- allow students time to think – 'wait time'
- only then, call on someone to respond

This approach makes everyone responsible for generating an answer, particularly when combined with some of the simple co-operative techniques described later in this handbook.

In school...practice example

"We focused on questioning by looking at *Bloom's taxonomy*, creating example questions relating to learning objectives and developing success criteria for effective questioning. This has strengthened literacy, particularly when teachers are framing questions during guided and shared reading. Our next step is to improve pupils' knowledge of the different types of questions, which will support them when posing their own questions."

"In evaluating the effectiveness of teacher questioning in reading group activities across six classes, interactions with pupils were quantified according to the amount of time spent listening and questioning readers. The frequency and level of questions posed to develop comprehension of the text were categorised as 'below', 'equal to' or 'above' the child's current reading level. Participating teachers found this valuable in ensuring the level of their questioning was appropriate to learner needs."

Reference resources

[8/9]Hattie, J. (2009) *Visible Learning*, Oxford, UK: Routledge, page 182.
[10] Anderson, L. *et al. (Eds)* (2001) *A Taxonomy for Learning, Teaching, and Assessing - A Revision of Bloom's Taxonomy of Educational Objectives*, Addison Wesley Longman, Inc.

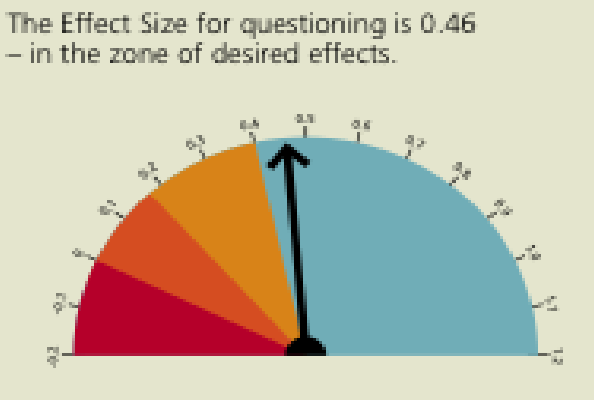
On reflection...

How can higher order questions be incorporated into teachers' practice to enhance students' understanding and achievement in your school?

In action...

It is now well established that good questions are – clear, purposeful, brief, natural and adapted to the level of the class, sequenced and thought provoking. The 'Questioning Techniques Observation Scale' reproduced below from *Looking in Classrooms* can be used to collect data about how closely the teacher follows good questioning principles. It has been shown to be helpful to teachers and others in learning support roles in classrooms, as they work in collaboration to refine their approach to questioning.

Effect size: Questioning



Questioning Techniques Observation Scale

BEHAVIOUR CATEGORIES		CODES				
		A	B	C	D	E
A. TYPES OF QUESTIONS ASKED	Q1					
1. Academic: Factual. Seeks specific correct response.	Q2					
2. Academic: Opinion. Seeks opinion on a complex issue where there is no clear-cut response.	Q3					
3. Non-academic: Question deals with personal, procedural, or disciplinary matters rather than curriculum.	Q4					
	Q5					
B. TYPE OF RESPONSE REQUIRED	Q6					
1. Thought question – students must reason through to a conclusion, or explain something at length.	Q7					
2. Fact question – student must provide fact(s) from memory.	Q8					
3. Choice question – requires only a yes-no or either-or response.	Q9					
	Q10					
C. SELECTION OF RESPONDENT	Q11					
1. Names student before asking question.	Q12					
2. Calls on volunteer (after asking question).	Q13					
3. Calls on non-volunteer (after asking question).	Q14					
	Q15					
D. PAUSE (AFTER ASKING QUESTION)	Q16					
1. Paused a few seconds before calling on student.	Q17					
2. Did not pause before calling on student.	Q18					
3. Not applicable: teacher named student before asking question.	Q19					
	Q20					
E. TONE AND MANNER IN PRESENTING QUESTION	Q21					
1. Question presented as challenge or stimulation.	Q22					
2. Question presented matter-of-factly.	Q23					
3. Question presented as threat or test.	Q24					

Record any information about the following

Multiple Questions	
Tally the number of times the teacher:	
– Repeats or rephrases question before calling on anyone	
– Asks two or more questions at the same time	

Sequence	
Were questions integrated into an orderly sequence, or did they seem random or unrelated?	

Other	
Did the students themselves pose any questions?	
Was there student-to-student interaction? How much?	
When appropriate, did the teacher redirect questions to several students?	
When appropriate, did the teacher ask students to evaluate their own or others' responses?	

Reference resources

Good, T. and Brophy, J. (2008) *Looking in Classrooms* (Tenth Edition), Boston, MA: Allyn and Bacon, page 334.

Reflection for action...Use the observation scale above in peer coaching triads to gather data for a professional discussion on the use of higher order questioning in your school.

Self-assessment: Framing higher order questions in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Higher order questions When teachers systematically use **higher order questioning,** the level of student understanding is deepened and their achievement is increased.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Connecting feedback to data

Theory of action for the teacher

Theory of action principle

*'When teachers consistently use **feedback and data** on student actions and performance, then behaviour becomes more positive and progress accelerates.'*

In principle...

Feedback is one of the most powerful influences on student achievement. That is clear from both psychological theory and research. In *Visible Learning*, John Hattie[11] provides a powerful insight, as he describes his attempts to understand feedback:

'*The mistake I was making was seeing feedback as something teachers provided to students – they typically did not, although they made claims that they did it all the time, and most of the feedback they did provide was social and behavioural. It was only when I discovered that feedback was most powerful when it is from the student to the teacher that I started to understand it better.*

When teachers seek, or are at least open to, feedback from students as to what students know, what they understand, where they make errors, when they have misconceptions, when they are not engaged – then teaching and learning can be synchronized and powerful. Feedback to teachers helps make learning visible.'

In practice...

In considering data and feedback that moves beyond the purely academic, Hattie suggests that a behavioural focus on student performance helps students to recognise the linkage between effort and outcome. In addressing this behavioural dimension of student performance and achievement, it is recommended that the teacher should:

- model beliefs
- focus on mastery
- portray skill development as incremental and domain specific
- provide socialisation with feedback
- portray effort as investment rather than risk

In school...practice example

"The systematic use of data and feedback is crucial within our school, the aim being to combine recording and monitoring of data with focused activities to enhance skills development. We have created detailed *Assessment Trackers* into which a wealth of data is placed including that concerning pupil progress in relation to targets, standardised testing information, and basic skills requirements. This information, closely monitored, is used to inform on interventions and to monitor their efficacy.

In addition, students are encouraged to have access to appropriate data, for example, progress made in a basic skill. One of our maths interventions makes progress data visually available to the student, ensuring a positive reinforcement of the link between effort and outcome. Pupils and parents are given detailed information about pupil targets, as well as regular reviews, and children work on the practical achievement of the targets during daily 'Basic Skills' sessions."

On reflection...

How can data and feedback to learners be used effectively to accelerate progress and promote more positive student behaviour in your school?

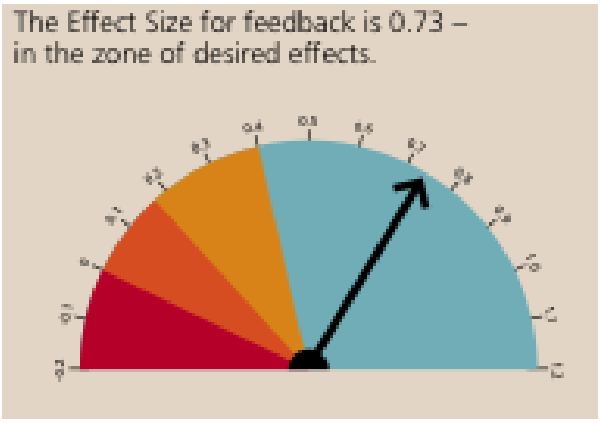
Reference resources

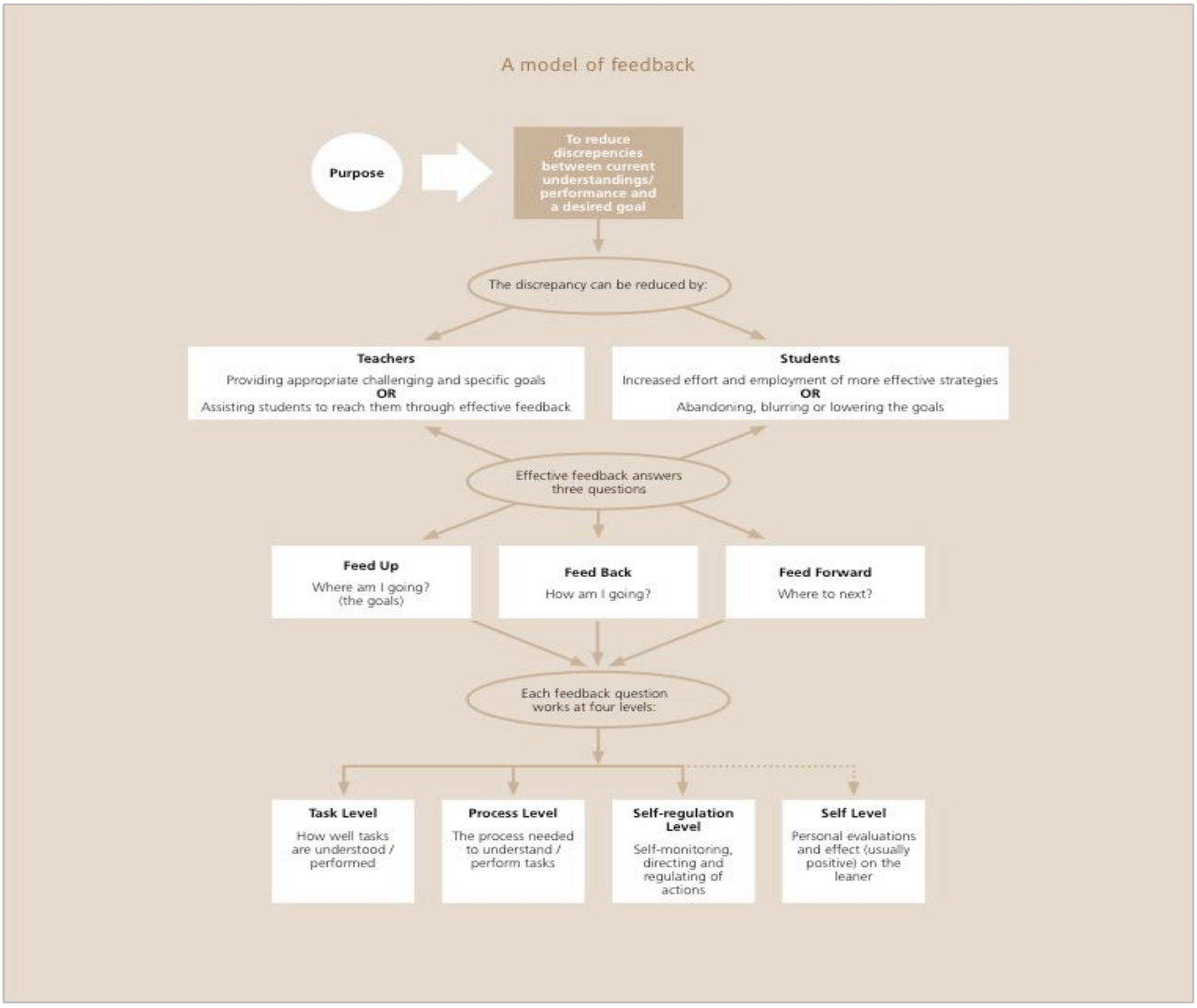
[11] Hattie, J. (2009) *Visible Learning*, Oxford, UK: Routledge, page 173.

In action...

Feedback based in evidence supports students to develop independence as learners. It directs and focuses their learning. In this way, feedback also magnifies the application of teaching expertise. The main purpose of feedback is to reduce the discrepancies between a learning intention or goal and current understandings, behaviours and performance. As the flow chart from *Visible Learning* shows below, the feedback depends on the various levels of task performance, process competence and meta-cognition at the individual level.

Effect size: Feedback





Reference resources

Hattie, J. (2009) *Visible Learning*, Oxford, UK: Routledge, page 176.

Reflection for action...Use the flow chart above as a stimulus for discussion with staff about how data is used to track student progress and the role of ICT in increasing the effectiveness of feedback in your school.

Self-assessment: Connecting feedback to data in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Feedback and data When teachers consistently use **feedback and data** on student actions and performance, then behaviour becomes more positive and progress accelerates.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Committing to assessment for learning

Theory of action for the teacher

Theory of action principle

*'When **peer assessment and assessment for learning** (AfL) are consistently utilised, student engagement, learning and achievement accelerates.'*

In principle...

Assessment for learning (AfL) has been defined[12] as: '*The process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there.'*

This may be organised differently in different schools, but the rationale is always the same:

- Clear evidence about how to drive up individual attainment.
- Clear feedback for and from pupils, so there is clarity on what they need to improve and how best they can do so.
- Clarity for students on what levels they are working at, with transparent criteria to enable peer coaching.
- A clear link between student learning and lesson planning.

In practice...

The OECD project on Formative Assessment[13] concluded that formative assessment is one of the most useful strategies in improving student performance. It identified the following practices as ones that consistently emerged during their research:

- Establishment of classroom cultures that encourage interaction and the use of assessment tools.
- Establishment of learning goals and tracking individual student progress.
- Use of varied instruction methods to meet diverse student needs.
- Use of varied approaches to assess student understanding.
- Feedback on student performance and adapting instruction to meet learner needs.
- Active involvement of students in the learning process.

Teachers need to continue to develop their understanding of how students learn so they can help them to: reflect on how they learn; develop learning strategies and apply them in different circumstances; and engage in high quality dialogue with teachers, peers and others.

In school...practice example

"Analysis of data is vital in informing whole-school future developments. Pupil ownership of their personal and group targets plays an important role in them understanding their next steps in learning. Teachers create these targets in consultation with pupils and they are then shared with parents.

Learning objectives are shared with pupils and the success criteria are agreed. Pupils are encouraged to formulate their own criteria and share these with peers. Feedback during the lesson is provided to the teacher using strategies such as 'thumb tools' and 'partner talk'.

All staff adhere to a very structured marking code and provide children with meaningful feedback. Time is set aside to allow children the opportunity to reflect upon the feedback they have received and respond to it appropriately. All pupils are encouraged to demonstrate their understanding of the lesson and self/peer-assess their performance using 'traffic lights' and written comments."

On reflection...

How can peer assessment and assessment for learning (AfL) be used to accelerate student learning, achievement and engagement in your school?

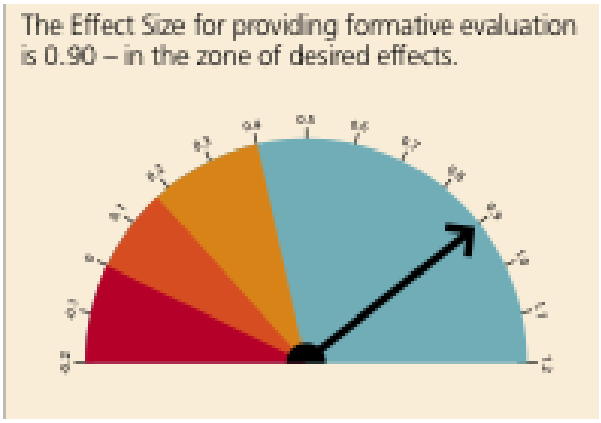
Reference resources

[12/13] Cited in - Hopkins, D. (2007) *Every School a Great School*, Maidenhead, Berkshire: Open University Press / McGraw Hill, 2007.

In action...

Assessment for learning (AfL) offers the opportunity for a radical redefinition of the culture of classroom practice. AfL strategies have been found to be particularly powerful in building ownership of the teaching and learning process amongst both students and teachers alike. Michael Fullan and colleagues illustrate this in their book entitled *Breakthrough,* where they explore the principles and practices of AfL. This work provides the basis for the reflection template presented below.

Effect size: Formative evaluation



Principles of Assessment for Learning

Do we...	What is the evidence? Could we do more?
Collect clear evidence that informs us about how to lift *individual* attainment?	
Offer clear feedback to, and seek clear feedback from, our students?	
Ensure we are precise about what each student needs to improve, and how best to get there?	
Ensure our students know what grades/levels they are working at, and that they have transparent criteria that enable peer coaching?	
Have an evidence-based link between student learning and lesson planning?	

Teaching practices that characterise formative assessment

Do we...	What is the evidence? Could we do more?
Sustain classroom cultures that encourage interaction and use of assessment tools?	
Establish learning goals and track individual student progress?	
Consciously select varied instruction methods to meet diverse student needs?	
Employ varied approaches to assess student understanding?	
Provide feedback on student performance and adapt instruction to meet identified needs?	
Actively support student involvement in the learning process?	

Helping students to gain the most from formative assessment

Do our students...	What is the evidence? Could we do more?
Reflect on how they learn?	
Develop learning strategies and apply them in different circumstances?	
Engage in high quality classroom dialogue with teachers, other adults and their peers?	

Reference resources

Fullan, M., Hill, P. and Creola, C. (2006) *Breakthrough*, London: SAGE Publications.

Reflection for action...Use the reflective template above to assess the current approach to assessment for learning in your school.

Self-assessment: Committing to assessment for learning in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Assessment for learning When **peer assessment and assessment for learning** are consistently utilised, student engagement, learning and achievement accelerates.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Implementing co-operative groups

Theory of action for the teacher

Theory of action principle

*'If teachers use **co-operative group structures/techniques** to mediate between whole class instruction and students carrying out tasks, then the academic performance of the whole class will increase as well as the spirit of collaboration and mutual responsibility.'*

In principle...

Co-operative group work has a powerful effect in raising pupil achievement because it combines the dynamics of democratic processes with the discipline of academic enquiry. It encourages active participation in learning and collaborative behaviour by developing social as well as academic skills. The approach is highly flexible and draws on a wide range of methods - individual research, collaborative enquiry and plenary activities - and allows the integration of them all into a powerful teaching tool. It is most commonly used as part of the direct instruction model, both as part of teacher instruction and the structuring of group activities, although at times the teacher will use the approach to structure a whole lesson or series of lessons.

In practice...

All co-operative groups are underpinned by the following principles:

- **Positive interdependence** - all individuals must succeed for the group to succeed.
- **Individual accountability** - holding every member of the group responsible to demonstrate the accomplishment of the learning.
- **Face-to-face interaction** - when group members are in close proximity to each other and enter into a dialogue in ways that promote continued progress.
- **Social skills** - such skills enhance communication, trust, leadership, decision-making, and conflict management.
- **Processing** - when group members assess their collaborative efforts and target improvements.

Co-operative group work requires pupils to practise and refine their negotiating, organising and communication skills, define issues and problems and develop ways of solving them. This includes, collecting and interpreting evidence, hypothesising, testing and re-evaluating.

In school...practice example

"When my classes are involved in group work, I find it thoroughly rewarding as it engages them in their own learning and gives them a sense of purpose that they may otherwise not get.

I am careful to ensure that each pupil is given a role that they have to fulfil in order to avoid the situation whereby a pupil can 'sit back' and watch others do all the work.

Group work, in my classroom, can also prove to be an effective differentiation tool, as it allows the more able to support/teach the lesser able pupils and, in turn, enhance each other's learning.

Finally, the enjoyment garnered from group work is plain to see in pupils and it creates a positive working environment wherein each pupil feels valued."

On reflection...

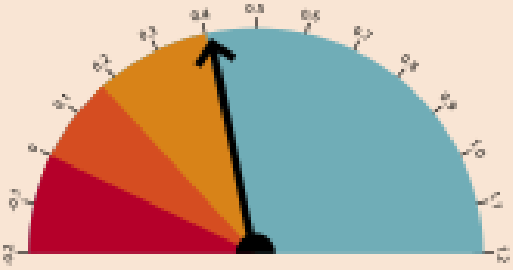
How can co-operative groups be utilised to provide more engaging contexts for collaboration and mutual responsibility amongst students in your school?

In action...

For co-operative methods of learning to be effective, they have to be planned, implemented and monitored very carefully. An ideological commitment to the idea is not enough and, indeed, can result in poorly conceived group activities that may quickly become a shambles. Whilst co-operative methods have an enormous potential for encouraging success in the classroom, this is unlikely unless they are introduced in a systematic and co-ordinated way. This means that teachers need to actively use the guidelines associated with each co-operative group strategy, in a precise and consistent way, as illustrated in the examples below.

Effect size: Co-operative learning

The Effect Size for cooperative learning is 0.41 – in the zone of desired effects.



Using Cooperative Group Strategies – two detailed examples

Numbered Heads	In an English lesson the learning intention is to extend competence in punctuating direct and indirect speech. The teacher explains the cooperative group strategy before implementing it. There are five key steps: 1. The class divides into named groups of four. 2. Each student is allocated a number. 3. From a displayed passage of unpunctuated dialogue and description each group is asked to identify the direct speech. 4. A bell rings after two minutes of discussion – this is a call for silence. 5. A number is called and the student with that number responds by identifying the direct speech. Advantages of 'Numbered Heads' include: – Group members are motivated to share information and make sure everyone knows the answer. – Every student has a chance to shine. – Because the group is behind them, anxiety about answering reduces. – Successful responses bolster individual and collective confidence. Boost confidence further using a team award system.
Jigsaw	In Jigsaw, the teacher is more an adviser and guide than a director. In Food Technology a teacher sets up a question or problem for enquiry. Topics might include food hygiene in the home, safe practice in the kitchen, processed versus organic foods, dangerous additives. There are five key steps: 1. Students divide into equal-sized groups, called Home Groups. 2. Each group is given an identical task and list of roles/jobs. 3. For five minutes, groups discuss the 'problem' and allocate roles/jobs. 4. Home Groups then divide: those with identical jobs form new Expert Groups tasked with collecting relevant information. 5. After a period of research, students return to their Home Groups and expert knowledge is pooled.

Using Cooperative Group Strategies – five brief examples

Twos to Fours, or Snowballing	Students work in pairs on a task. They then join with another pair to explain and compare what they have achieved.
Rainbow groups	A way of ensuring students experience working alongside a range of others is to give each child in a group a number, or a colour. After groups have worked together, students with the same number or colour form new groups to compare what they have done.
Envoys	This strategy helps students find support without necessarily having recourse to the teacher. If a group needs to check something, or to obtain information, one group member is sent as an 'envoy' to the library, or book corner, or another group. The envoy then reports back.
Listening triads	In groups of three, students take the roles of Talker, Questioner or Recorder: – The Talker explains or comments on an issue or activity. – The Questioner prompts and seeks clarification. – The Recorder makes notes. When the learning activity concludes, the Recorder reports on the conversation.
Critical friends	A group member is responsible for observing the ways in which the group works together. Using a simple guide list (which students can devise), the observer watches and listens as the group works. The group then discusses the observer's data on the group's activity.

Reference resources

Co-operative group work strategies in Joyce, B. R., Calhoun, E. F. and Hopkins, D. (2009) *Models of Learning – Tools for Teaching (Third Edition)*, Maidenhead, Berks, UK: Open University Press/ McGraw-Hill Education.

Reflection for action...Use the strategy examples above to stimulate discussion with staff about how co-operative group work can be used most effectively in your school.

Self assessment: Implementing co-operative groups in your school...

Theory of action	Self-assessment: Teachers			*Use the space provided to tick the box that applies to you*
Co-operative groups If teachers use **co-operative group structures/techniques** to mediate between whole class instruction and students carrying out tasks, then the academic performance of the whole class will increase as well as the spirit of collaboration and mutual responsibility.	**Few teachers know, use and review this practice**	**Some teachers know, use and review this practice**	**Most teachers know, use and review this practice**	**All teachers know, use and review this practice**
	☐	☐	☐	☐
	What is the evidence to support your self-assessment? ***Record your response here***			

Future focus for action...

In view of your self-assessment above what are your top three priorities for action?

1.

2.

3.

Use the space provided to record your thoughts and ideas

Implementing the theories of action: Making it happen

The potential contained in the ten theories of action described in this handbook is to create a new teaching culture within the school that promotes both enquiry and achievement. This requires adopting staff development strategies that have the ability to build a common language of instructional practice within and across schools.

Deepening professional learning

The strategy most suited to the acquisition of the theories of action is the now established approach to 'coaching' developed by Bruce Joyce and his colleagues. Their research on staff development has identified a number of key training components which, when used in combination, have much greater power than when they are used alone. The major components of training are:

- Presentation of theory or description of skill or strategy.
- Modelling or demonstration of skills or models of teaching.
- Practise in simulated and classroom settings.
- Structured and open-ended feedback (provision of information about performance).
- Coaching for application (hands-on, in-classroom assistance with the transfer of skills and strategies to the classroom).

It is also helpful to distinguish between the locations in which these various forms of staff development are best located – either in the 'workshop' or the 'workplace'. The workshop, which is equivalent to the best practice on the traditional professional development course, is where teachers gain understanding, see demonstrations of the teaching strategy they may wish to acquire, and have the opportunity to practise them in a non-threatening environment. If the aim is to transfer those skills back into the workplace - the classroom and school - then merely attending the workshop is insufficient. This implies changes to the workplace and the way in which staff development is organised. In particular this means the opportunity for immediate and sustained practice, collaboration and peer coaching, and studying development and implementation.

The paradox is that changes to the workplace cannot be achieved without, in most cases, drastic alterations in the ways in which schools are organised. Yet the transfer of teaching skills from professional development sessions to classrooms settings will not occur without them.

A key element in all of this is the provision of in classroom support or triads and 'peer coaching'. It is the facilitation of peer coaching that enables teachers to extend their repertoire of teaching skills and to transfer them from different classroom settings to others. When incorporated into a school improvement design, peer coaching can virtually assure 'transfer of training' for everyone:

- Peer coaching teams of two or three are much more effective than larger groups.
- These groups are more effective when all members of staff are engaged in school improvement.
- Peer coaching works better when Heads and Deputies participate in training and practice.
- The effects are greater when formative study of student learning is embedded in the process.

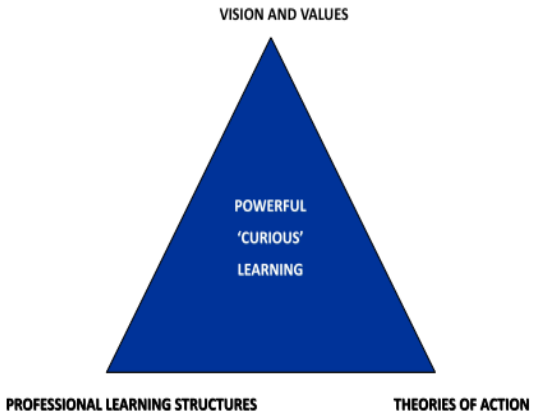
The question now is – 'how do we make all this happen?'

Reference resources

For further detail see: Joyce, B. R. and Showers, B. (1995) *Student Achievement through Staff Development* (Second Edition), NY: Longman and Joyce, B. R., Calhoun, E. F. and Hopkins, D. (1999) *The New Structure of School Improvement*, Buckingham: Open University Press.

Framing the challenge

In discussing 'making it happen' with Heads and teachers the following diagram has proved to be helpful in framing the challenge. The creation of a new culture of teaching and learning in school - requires the integration of three distinct but complementary aspects of the organisation of the school.



1. Vision and values

These are the explicit commitments that the school makes to the approach to learning it wants for its students and the expectations that it has for their success. In terms of this handbook it is a reflection of the four theories of action that relate to the whole school.

2. Theories of action

These are the precise specifications of practice that when incorporated into the repertoires of teachers will accelerate student learning, skills development and achievement, and result in them becoming more successful learners.

3. Professional learning structures

This refers to the culture of professional learning created in the school, the scheduled time it makes available for the learning of staff and the forms of activity involved. Without regular timetabled opportunities for professional collaboration such as peer coaching or triads that are non-judgemental, it is unlikely that the teaching and learning culture of the school will change.

Throughout this handbook, the 'In action...' activities presented for each theory of action have been designed to provide a stimulus for collaborative professional learning through shared reflection, analysis, self-assessment and forward action planning.

How the amalgamation of vision, structured professional learning opportunities and specifications of practice play out in practice, however, will also reflect the particular stage of development of the school. As confidence and competence increases so the professional enquiry becomes deeper and more learner or curiosity focused.

In the spirit of collaborative working, putting this framework into practice requires actions from teachers, the school and the local authority.

- **Teachers** – will need to be prepared to expand their 'circles of competence' by embracing the theories of action and incorporating them into their professional repertoires. The real insight here is that teachers can maintain all their personal values and commitments, whilst at the same time seeing their practice as an instrument for expressing who they are as a professional.

- **Schools** – will need to become increasingly self-conscious and specific about the expectations and entitlements of their students as learners. Simultaneously they will need to allocate time to allow for powerful professional learning opportunities among their staff.

- **Local authority*** – will need to develop the narrative around learning as well as carefully balancing challenge and support for schools as they progress on their journeys of school improvement.

* **Note:** The term 'local authority' is used here as a synonym for region, school district, academy chain or any other middle tier organisation

Expanding repertoire: models of teaching

In the pursuit of the promotion of enquiry in learning, the theories of action present a formidable agenda. They are, however, an important, but still first step on a journey. Once the theories of action have been mastered and incorporated into a personal style the horizon becomes flooded with opportunities to create even more powerful learning contexts for our students. In contemplating the next phase of the work, the real prize is to realise that how teaching is conducted has a large impact on students' abilities to educate themselves. As students acquire information, ideas, skills, values, ways of thinking, and means of expressing themselves, they are also learning how to learn. In fact, the most important long-term outcome of teaching may be the students' increased capabilities to learn more easily and effectively in the future both because of the knowledge and skill they have acquired, and because they have mastered learning processes.

Thus imagine a classroom where the learning environment contains a variety of models of teaching[14] that are not only intended to accomplish a range of curriculum goals, but are also designed to help students increase their competence as learners. Models of teaching are also models of learning.[15] Each model is designed to bring about particular kinds of learning and to help students become more effective learners. It is in this way that the use of teaching models form part of an overall strategy for enhancing teacher professionalism, enhancing student learning and provide the key strategy for personalising learning and promoting enquiry. Some examples of the relationship between teaching and learning strategy are illustrated in the following table.

Model of Teaching	Learning Skills
Advanced organiser (or whole-class teaching model)	Extracting information and ideas from lectures and presentations
Group work	Working effectively with others to initiate and carry out co-operative tasks
Inductive teaching	Building hypothheses and theories through classification
Mnemonics	Memorising information
Concept attainment	Attaining concepts and how to invent them
Synectics	Using metaphors to think creatively

As students' master information and skills, the result of each learning experience is not only the content they learn, but also the greater ability they acquire to approach future learning tasks with confidence and to create increasingly effective learning environments for themselves.

End note

In concluding, we must remind ourselves that in making it happen, the theories of action are simply tools that teachers can use to enhance students' learning, skills development and achievement. There are no ceilings to the performance of quality teachers.

Outstanding teachers take individual and collective responsibility to base their teaching on the best knowledge and practice available. But they also then take those ideas and strategies and critically reflect on them through practice in their own and each other's classrooms.

It is through reflection that teachers are able to harmonise, integrate and transcend the necessary classroom management skills, the acquisition of a repertoire of models of teaching, and the personal aspects of their teaching, and turn these into a powerful strategy for effectively leading learning in a way which has a positive impact on students' success.

Reference resources

[14] Joyce, B.R. and Weil, M. (2008) *Models of Teaching (*8th edition), Englewood Cliffs, NJ: Prentice-Hall.

[15] Joyce, B. R., Calhoun, E. F. and Hopkins, D. (2009) *Models of Learning – Tools for Teaching* (Third Edition), Maidenhead, Berks, UK: Open University Press / McGraw-Hill Education.

Notes

Use the space provided to record your thoughts and ideas

Theories of action for learning and teaching: Using instructional rounds for leading learning

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