Raising Attainment
Improving Life Chances

Effective Questioning

Improvement Feedback

Peer Tutoring

Peer Evaluation

Metacognition

Self-regulated Learning

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Effective Questioning

What is Effective Questioning?

Effective questioning is a key tool in Assessment for Learning strategies and should be planned such that a range of responses are anticipated. Good questions lead the learner on a journey in which there is a balance between content (who, what, when) and process (how, why).

Why is Effective Questioning Important?

Effective questioning is a key aspect of the teaching and learning process, as the kinds of questions we ask determine the level of thinking we develop. Lessons that incorporate questions are more effective in raising attainment than lessons which do not. Good questioning requires time for pupils to think and respond, and the more learners are actively engaged in learning, the less scope there is to switch off.

Asking well structured/thought-out questions has a number of positive benefits within the classroom including:
* Directing students' thinking in a particular way
* Encouraging learners to think and actively construct their own schemas
* Structuring or guiding the learning of a task
* Allowing teachers to assess the learning of their students both in terms of what they bring to the lesson and what they are taking from the lesson
* Identifying gaps and/or misconceptions in students' learning
* Providing immediate insight into where the learning of pupils has developed to
* Helps students clarify their understanding of a topic
* Motivating students' interest and engagement in a topic
* Providing opportunities for student learning through discussion

What are the Characteristics of Effective Questioning?

Good questions are purposeful and promote learning. Teachers should anticipate where mistakes may arise and have probing questions or examples ready to shape learning . How teachers respond to erroneous answers is critical in maintaining trust and developing curiosity. Mistakes should be experienced genuinely as learning opportunities.

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Types of Questions

- **Closed questions** are useful in checking pupils' memory and recall of facts. Typically there is only one 'right' answer.

Who discovered penicillin? When was the battle of Flodden? What are the characteristics of living things?

> However, closed questions can invite a game of 'guess what the teacher is thinking'. Wrong responses risk humiliation in a public arena and can create 'performance anxiety' which reduces the willingness of some pupils to contribute ideas.
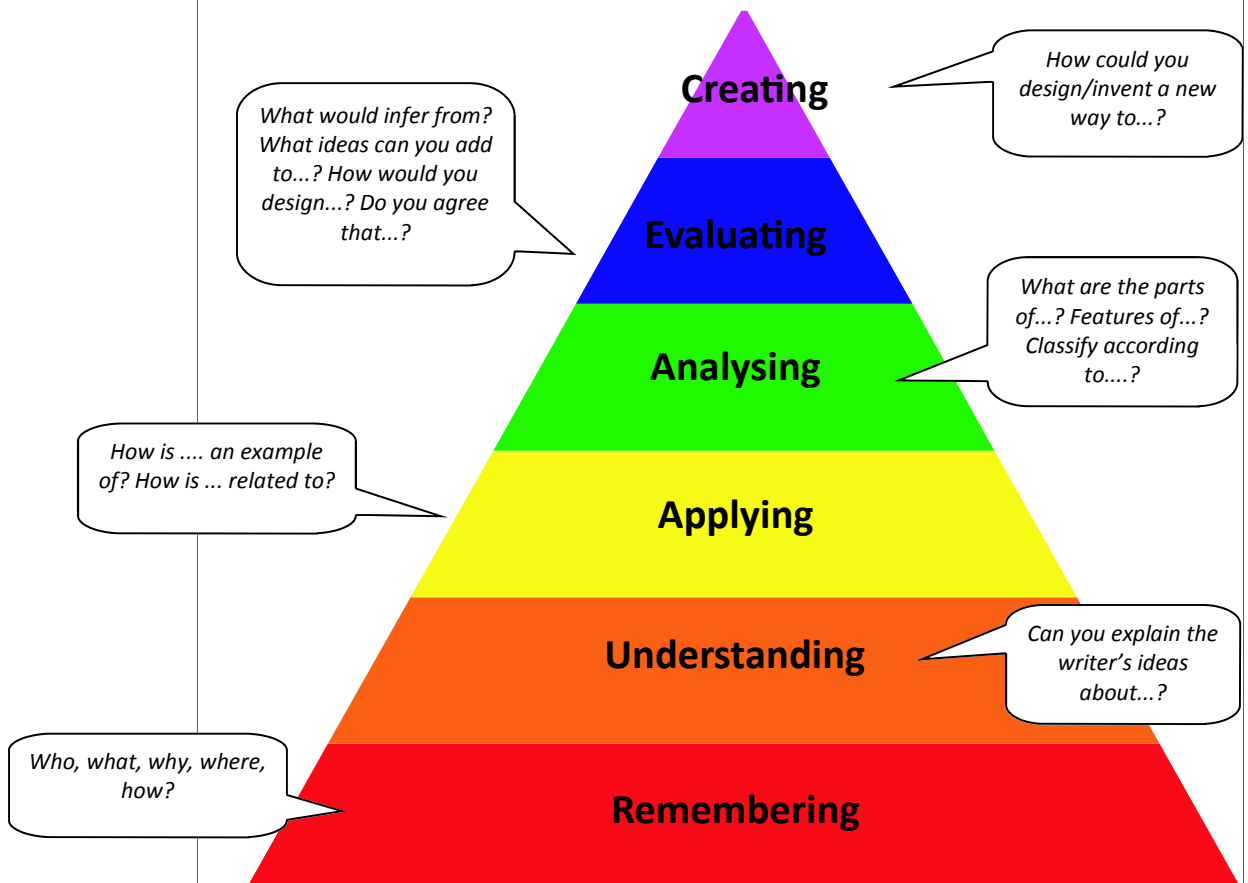
- **Open questions** have more than one answer and typically promote higher order thinking skills. When well designed, they enrich the learning experience by encouraging links to be made by the learner from previous understanding to the current situation. They can also enable teachers to check pupils' knowledge and understanding, to assess learners' ability to apply acquired knowledge, and generalise it to new contexts boosting problem solving skills and developing creativity.

> *What do you remember about Stig? What do you think will happen next? How are you going to remember how to spell 'friend'? Why might some birds mate for life? What are the pros and cons of planning an essay?*

Bloom's Taxonomy

There is a hierarchy of types of learning in the classroom, with the most in depth at the top, therefore questions can be planned to develop deeper learning:

Creating

How could you design/invent a new way to...?

Evaluating

What would infer from? What ideas can you add to...? How would you design...? Do you agree that...?

Analysing

What are the parts of...? Features of...? Classify according to....?

Applying

How is .... an example of? How is ... related to?

Understanding

Can you explain the writer's ideas about...?

Remembering

Who, what, why, where, how?

Strategies for Effective Questioning

- Ask learners in twos or threes what they would like to know about the topic or subject first to stimulate interest and assess how much the pupils already know about it.

- Ask pupils to discuss their answers first; this enables shy pupils to contribute more and for many pupils it is much more comfortable to say 'we thought' than 'I think'.

- Ask a thought provoking question at the start of the lesson to crystallize a key concept and engage learners – this might be asked again at the end of the lesson or topic.

- Ask the rest of the class to evaluate a response – what does everyone else think?

This helps to enrich the answer and may allow the initial responder to reconsider their answer in light of other ideas.

- Allow thinking time and then allow people to change their minds or have another go. Do you still think ...? This helps to keep pupils thinking and puzzling about what they really think or believe, especially where new information is revealed – What would happen if ....?

- Ensure a balance between closed and open questions as well as content and process related questions. A simple first question if well prepared can lead into a journey of true discovery

- Develop a stock of good follow up questions which might be quite simple

but ,as far as possible, be clear where the question is leading. Be prepared to be flexible and inclusive about the route – What else? How come? What if? How do think/feel/ know? Are examples that can extend simplistic responses.

- Show appreciation for any answer and give appropriate praise for high quality responses

- Wrong answers should not be left uncorrected, but followed up with additional related questions, or allow "wait time" to provide students with an opportunity to rethink answers

- Rephrase questions to simplify them or ask them in another way

Maximise Responses by...	Minimise Responses by...
Asking open questions that begin with words like "What if..." "Explain," "Analyse" "Create" and "compare and contrast" etc.	Asking closed questions that have a "yes" or "no" response or questions that simply require direct recall of definitions and/or information.
Increasing "wait time" after you pose a question, to allow students more time to process the question in	Calling on students directly after you pose a question and calling on a student before you even ask the ques-
Asking students to elaborate on their answers and asking students "why?".	Telling a student their answer is wrong and not asking them to think about why it is wrong.
Allow opportunities for students to pose questions amongst themselves.	Straight lecture without student interaction.
Providing opportunities that challenge students' original conceptual understandings.	Providing opportunities that do not encourage creative and critical thinking.
Encouraging students to work through their decision making process, even if it brings frustration and makes them leave their comfort zone of learning.	Giving students direct answers to their questions without allowing them to think through the decision making process.

Overview

Effective questioning is a key aspect of the teaching and learning process. How questions are fielded by teachers sets the learning climate and enables pupils' thinking to be revised, affirmed and extended in a cost effective way which also supports positive relationships between teachers and learners.

For further information:

Clarke, S. (2001). Unlocking Formative Assessment. London: Hodder and Stoughton.

www.ndt-ed.org/TeachingResources/ClassroomTips/

Effective_Questioning.htm

http://projects.coe.uga.edu/epltt/index.php?title=Bloom%

27s_Taxonomy

Improvement Feedback

What is Improvement Feedback?

Improvement feedback involves coaching learners on how to improve their performance towards identified goals. It is the most effective way for teachers to raise attainment, providing the highest impact for the lowest cost (Sutton Trust, 2011).
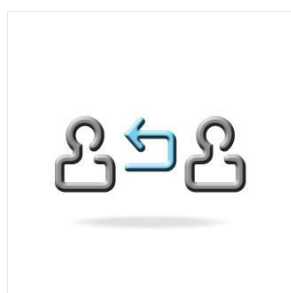
Why is Improvement Feedback Important?

Improvement feedback provides encouragement, support, corrective measures and direction. Simply providing marks out of 10 or grades, does not indicate to the learner what they need to do to improve performance. When marks or grades are accompanied by comments, pupils generally ignore the comments (Black and William, 1998). Marks and grades can also have negative impacts on attainment because they are ego-orientated; they actually divert attention away from the learning process towards status in the peer group, "What did you get?" Pupils who receive poor marks (comparative to their peers) can become risk averse, de-motivated and are likely to invest less in future tasks.

What the learner needs to know is what they can do to progress throughout their learning journey, what knowledge and skills they need to develop, and what the next step is. Through the use of informative feedback, teachers can communicate this to the pupil in helpful, bite-size pieces (Clarke, 1998).

"Feedback is not about praise or blame, approval or disapproval: that's what evaluation is — placing value. Feedback is value-neutral, it describes what you did and did not do." (Wiggins, 1997)

Characteristics of Good Improvement Feedback

- **Task focused** and given with the goal of improvement
- **Specific / clear** – feedback should include what needs to be improved or developed next
- **Positive** – clearly identify what has been achieved, accomplished or developed
- Provided in a **timely** manner so that it is meaningful or relevant
- **Age and stage appropriate** – so that it is understandable to the recipient

e.g. "Well done" is not helpful; instead try "Your vocabulary to describe the haunted house is excellent. Make sure you use full stops and capital letters correctly right to the end of the story."

In addition, learners need to be provided with **opportunities to apply** the feedback. The teacher must be able to record developments and be aware of the level of mastery the learner has so they can track skill developments:

- *Can the learner demonstrate the skill only in specific situations e.g. in a handwriting exercise?*
- *Can they demonstrate it repeatedly (at an acceptable level)?*
- *Can they demonstrate it in a range of settings (generalising it)?*
- *Can they demonstrate it automatically (is it an embedded skill)?*

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Strategies for Improvement Feedback

Providing quality feedback is itself a skill which takes time to develop. It also takes longer, especially in the early stages, than marks or grades, so teachers need to find ways of reducing the amount of marking they undertake. Possible strategies might be to:

- **Reduce the number of books marked** each week to perhaps 1/3 of the class to provide the time for quality comments from the teacher
- **Develop skills in the peer group** so that feedback is embedded in routine class time e.g. two stars and a wish.
- Invest time in **establishing agreed criteria** for marking schemes, so pupils understand the task demands and can evaluate their own work at the end of the session. Answer sheets with the correct content can be made available and allowing time to discuss and resolve differences of interpretation, can all enhance learning.
- Establishing a **universal comment bank** to provide stimuli or prompts may be helpful, or getting other teachers to moderate the quality of feedback comments.
- **Setting the minimum standard of work** for a class or group based on information acquired via assessment for learning can be highly motivating, as pupils can then recognise they are achieving more than was
  required of them and so become more self motivated.
- Engaging pupils in **defining** what **successful achievement** of the task should look or sound like. Providing samples of work (e.g. descriptions that use exciting adjectives, samples that exemplify missing traits) can lead learners into an analysis or appreciation of what is being asked for or the "criteria for success". They are then better able to incorporate them into their own work.
- The use of "**closing the gap prompts**" for example using reminders, suggestions and questions, to help close the gap between where the students are and where they are aiming to be.

Overview

Evidence about the learner's current level of skill is critical to providing improvement feedback. Not only must feedback provide information to the learner in terms of how their performance relates to the learning goal, it must also provide strategies and tips on how to achieve that goal (Clarke 1998, 2008). Effective feedback must give each learner guidance on how to improve, and each learner must be given help and the opportunity to work on the

For further information:

Clarke, S. (2008). *Active learning through formative assessment.* Hodder Education. ISBN-10: 0340974451

Clarke, S. (1998). *Targeting Assessment in the primary school - Strategies for planning, assessment, pupil feedback and target setting.* Hodder & Stoughton. ISBN 0 340 72531 1

Black, P. & William, D. (1998). *Assessment and classroom learning.* Assessment in Education, 5 (1), 7-71.

Higgins, S. & Coe, R. (2011). *Toolkit of strategies to improve learning.* The Sutton Trust

Wiggins, G. (1997), Feedback: How learning occurs. In: E. E. Chaffee (Ed.) *Assessing impact: Evidence and action* (p. 31-39). Washington DC: American Association for Higher Education.
Accessed from www.heacademy.ac.uk/assets/documents/resources/database/id353_senlef_guide.pdf

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Peer Tutoring

What is Peer Tutoring?

Peer tutoring is a structured approach where pupils learn together, usually in pairs. There are different types of peer tutoring: the pairs can be matched by ability or be of different ages/abilities, depending on the approach used. Peer tutoring has been applied to different curricular areas; the most common is *paired reading*. However, there are also structured interventions for cued spelling and paired writing,
thinking, problem solving, ICT and science.

All peer tutoring approaches have the following characteristics:
*   Specific role-taking as tutor or tutee
*   Children are matched according to specific considerations
    > Same age or cross-age
    > Reciprocal or one way
    > Whole class or targeted group
    > Similar ability or cross ability
*   Specific procedures for interaction between tutor and tutee
*   Training for pairs in the technique
*   Both pupils experience cognitive challenge
*   Usually a time-limited intervention

Why is Peer Tutoring Important?

Structured peer learning programmes have been well evaluated and evidence indicates a variety of gains depending on the programme used. These include cognitive, social, emotional and behavioural gains for participants. During peer tutoring with mixed ability peers, for example, even the children of higher ability make cognitive gains. During paired reading, both tutors and tutees show gains in reading ability.

Peer tutoring works because:
*   It provides skills practice
*   It provides immediate feedback on performance
*   Errors are corrected promptly
*   Effective learning behaviours are modelled by the tutor
*   It provides 1:1 attention
*   It provides different insight into learning: tutor is reprocessing information and considering how to present it to another learner

Other benefits
*   Socially inclusive: all can participate and benefit
*   Active, interactive, individualised learning
*   Cost effective
*   Cooperation not competition – reflecting school ethos
*   Helps develop communication skills

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What are the Characteristics of Good Peer Tutoring?

It is important that any programmes are planned and carried out thoroughly, including training participants and monitoring the programmes.

Strategies for Peer Tutoring

Setting Up Peer Tutoring
- Deciding the type of peer tutoring
- Communicating to parents the benefits
- Gathering required materials
- Selecting pairings – on what basis?
- Timetabling
- Initial training
- Sustaining motivation
- Ongoing monitoring/quality assurance
- Evaluation

Training
Initial
- Children already matched and work in these pairs
- Demonstration/role play
- Practice technique in pairs

Ongoing
- Video of good examples
- Focus on particular aspects of technique at different times
- Positive checking words – develop praise dictionary

Paired Reading
Paired reading generally takes place between peers of different ability. They can be of the same age or different ages.

What To Read
Tutee chooses a book which interests them but is more difficult than their independent reading level ("five finger test" to see if words are too easy or too difficult).

Reading Together
Tutor and tutee read simultaneously; tutor matches speed of tutee and uses lots of praise. Talk about pictures and the story at a natural break.

Correction
Give tutee 5 seconds to self correct. After 5 seconds, tutor gives word and tutee repeats.

Reading Alone
When tutee feels confident, gives signal to tutor and tutor stops reading immediately. Tutee reads alone until makes mistake. If can't self-correct, back to reading together.

Ideally, paired reading should take place at least 3 times each week for 15-20 minutes.

Peer Learning builds on individuals' strengths and mobilises them as active participants in the learning process … they also learn transferable skills in helping, cooperation, listening, and communication. PL encourages personal and social development. All of this influences the school ethos, developing a cultural norm of helping and caring. Topping (2005)
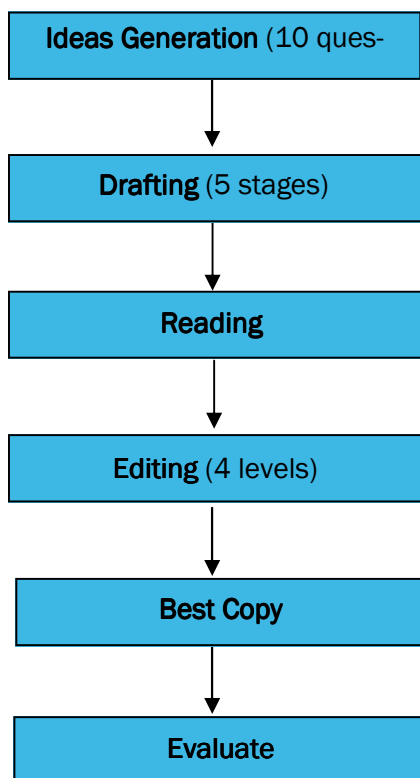
Strategies for Peer Tutoring

Paired Reading & Thinking
Builds on paired reading and involves questions before, during and after reading. Questions relate to prediction, summarising, evaluating and self assessing. The aim is to develop higher order thinking skills.

Paired Writing
Can be used with creative, descriptive, technical or foreign language writing. There is a writer and helper. Process:

```
Ideas Generation (10 ques-
            │
            ▼
Drafting (5 stages)
            │
            ▼
Reading
            │
            ▼
Editing (4 levels)
            │
            ▼
Best Copy
            │
            ▼
Evaluate
```

Paired Science
Tends to be cross-age peer tutor-ing, involving learning through hands-on experience. Example of pro-cess:

- Self-instructional scientific worksheets in 7 areas with scientific key words, low readability and an explanation for tutors
- Everyday equipment
- Pairs choose activity
- Tutor provides low-key support

Overview
Peer tutoring is a beneficial educational practice in which students interact with other students to attain their educational goals. Structured peer learning programmes can provide a variety of benefits to the participants depending on the programme used, including cognitive, social, emotional and behavioural gains .

For further information:

Topping, K. (2005). Trends in peer learning. *Educational Psychology 25 (6)*, p. 631-645.

Information about paired reading, thinking and writing:
www.dundee.ac.uk/eswce/research/projects/trwresources/

Peer Evaluation

What is Peer Evaluation?

Peer evaluation or assessment refers to the many ways in which students can share their creative work with peers for constructive feedback, and then use this feedback to revise and improve their work.

Why is Peer Evaluation Important?

One of the advantages of developing peer evaluation skills in pupils is that it can enable teachers to manage the learning of their pupils and organise their own resources more effectively. It allows teachers more time to observe how pupils are learning and to focus on the learning of particular groups of pupils who need additional input to clarify misunderstandings, or to extend learning. The main advantage to the pupils is that it provides students with the opportunity to develop their critical thinking skills by learning how to offer productive feedback, accept constructive criticism and master revision.

What are the Characteristics of Good Peer Evaluation?

Effective Peer evaluation should be:

- Considered and thoughtful
- Constructive
- Relevant
- Specific

When conducting peer editing in a class, it is generally best for the teacher to assign partners according to their ability. The class should be divided into weaker and stronger students, and they should plan on doing the peer review process twice:

- The first time, a student from group A should be matched with a student from group B. This will allow a weaker student to take help from a stronger student.
- The second time, allow weaker students to work together and stronger students to work together. It is important to give stronger students a chance to give each other feedback and advice, otherwise stronger students will not improve their writing and they may not feel challenged.

Peer Review Procedure:
1) Student 1 reads his/her story (or assignment) aloud (helps with proofing)
2) Student 2 reads his/her story (or assignment) aloud
3) Students swap stories (or assignments) and proof read while reading
4) Students fill in peer editing sheets
5) Students discuss their comments and suggestions

Teachers should hand out the peer review worksheets and guide participants in the procedure outlined above. They should also make sure that pupils are following the agreed learning intentions and should give clear constructive comments and suggestions for improvement.

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What does Peer Evaluation look like?

Examples of peer evaluation in the classroom include:

- **Traffic Light assessment:** students read each others' writing and apply colours (green means explanation is better than the assessor's, yellow means it is of similar quality, red means the assessor feels their answer is better), then discuss the results of the assessment.
- **Paired evaluations with check lists**
- **Group evaluations** or whole class assessments through presentations
- **'Two stars and a wish' peer assessment:** where pupils are invited to provide evaluative comments about the work of peers. A structured format of two positive comments ("things I liked…") to one improvement suggestion or wish ("I would have liked to know more about…") ensures the evaluation is considered and thoughtful. Those evaluating can then be coached in what constitutes 'good', useful or helpful evaluative comments by the teacher.
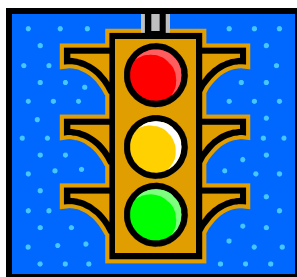
Sample Peer Review Questions: Here is a list of sample peer review questions for a compare & contrast essay.

1) Does the topic sentence show the main point? How could it be improved?
2) Does the topic sentence catch the reader's attention?
3) Is there a clear compare & contrast pattern in the paper? Is it AABB or AB-AB?
4) Does the paper show the author's personality?
5) Are specific examples used to support points made in the essay? If yes, cite one example. If no, cite one place where the author could use a concrete detail to make his/her point stronger.
6) Are wording and ideas fresh and interesting? How could it be improved?
7) Name three things you liked about the paper.
8) Give three comments or suggestions to improve the paper.

Strategies for Peer Evaluation

Giving evaluations that are both supportive and challenging is a high level skill that needs to be taught and practiced. If pupils are to offer helpful feedback it helps if they are exposed to good modelling. Fundamentally, they must have a clear understanding of what they are to look for in their peers' work. The Class Teacher (CT) must explain expectations clearly to them before they begin.

- **Provide practice sessions**: provide a sample assignment usually written but it could be performed or spoken. As a group, pupils determine what should be assessed and how criteria for successful completion of the task should be defined. The CT gives pupils a sample completed assignment. Pupils assess this using the criteria they have developed, and determine how to convey feedback clearly to the fictitious pupil.
- **Literacy circles** using peer editing check lists can help focus pupil attention on key aspects of a specific task or aspect of the content or process of learning.
- **Use of checklists**: Pupils can also benefit from using rubrics or checklists to guide their evaluations. At first these can be provided by the CT; once pupils have more experience, they can develop criteria themselves. An example of a peer editing checklist for a writing assignment might ask the peer evaluator to comment primarily on the content and organization of the essay. They can help the peer evaluator to focus on these areas by asking questions about specific points, for example, the presence of examples to support the ideas discussed.
- **Pupil-teacher contracts**: Contracts are written agreements between the pupil and CT, which commonly involve determining the number and type of assignments that are required for particular grades. For example, a pupil may agree to work toward the grade of "B" by completing a specific number of assignments at a level of quality described by the CT. Contracts can serve as a good model in goal setting and enable pupils to begin learning how to set learning goals for themselves.
- **Good Self-evaluation and goals setting skills**: a necessary part of effective study skills which enhance the functioning of study groups. Untrained pupils are likely to create lofty long-range goals ("to speak Russian)" that do not lend themselves to self assessment. To help pupils develop realistic, short-term, attainable goals, CT can use a framework like SMART targets.
- **Compliments, suggestions and corrections strategy:** explain that starting with something positive makes the other person feel encouraged, e.g. two stars and a wish

Overview

Peer evaluation is an excellent skill which can be developed within the classroom to encourage pupils to further develop their critical thinking skills. It also enables teachers to manage the learning of their pupils more

For further information:

http://www.readwritethink.org/professional-development/strategy-guides/peer-review-30145.html
http://www.scmsa.org/files/Journal/2010-2011/NazzalPeerandSelf-Assessment.pdf
http://www.teachingexpertise.com/articles/peer-and-self-assessment-2867
http://voices.yahoo.com/classroom-procedures-using-peer-review-classroom-1727971.html

Metacognition:
Learning how to Learn

What is Metacognition?

Meta cognitive strategies are teaching approaches that make learners' thinking explicit in the classroom. They include learners being taught how to plan, monitor and evaluate their own learning.

Why is Metacognition Important?

Meta cognitive approaches have a consistently high or very high level of impact, with many studies showing substantial gains equivalent to moving a class up from the 50th centile to the 25th centile in a league table of 100 schools. The evidence indicates that it is particularly helpful for lower attaining pupils; while the bar is raised for all pupils, the gap between higher and lower achievers is reduced.

The more students are aware of their thinking processes as they learn, the more they can control elements such as personal goals, dispositions and attention. Self-awareness promotes self-regulation. The simplest approach to developing metacognition in pupils is to stop telling pupils what to think and get them to explain to you, themselves and each other what they are thinking.

A very useful teaching strategy is to use iterative (i.e. repetitive) approaches where more information is added to extend or challenge pupils' thinking. This encourages them to evaluate whether their initial thinking or position holds true. For example: Should the death penalty be reintroduced? What impact would it have on
conviction rates? What if someone is wrongly convicted? How much does it cost

What are the characteristics of Metacognition?

There are three aspects of learning applicable to both subject content and strategy knowledge that help to define Metacognition:

1. **Declarative knowledge** is factual information that can be declared, spoken or written. For example: knowing the spelling of 'Darwin', the dates of the industrial revolution, the formula to find the area of a circle or the difference between fiction and non-fiction.
2. **Procedural knowledge** is knowledge of how to perform the steps in a process (techniques): the procedure(s) to 'do' decomposition, the steps in an experiment, to plan extended writing or revise for a test.
3. **Conditional knowledge** is knowledge about when to use a particular skill or technique strategically and when not to use it; why a procedure works and under what conditions; and why one procedure is better than another. Which method for subtraction works best for them, for large numbers, for mental arithmetic, for an exam etc.

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What does Metacognition look like?

A key element in developing metacognition is understanding what is being asked (i.e. the **purpose** of the task).

For example, is the purpose of reading:

- To skim through a book to get an over view by looking at the contents page, chapter headings, pictures, then anything in bold or italic writing, sub headings, and then read the first sentence in any paragraph - or the first and last paragraphs?
- Is it to scan the text for a key word to answer a specific question?
- Is it to understand the text, using the sub-skills of comprehension namely predicting, questioning, clarifying and summarising?

Students need to understand the task accurately and the criteria for success in order to use the most effective strategies.

Strategies for Metacognition

- Learning techniques must be explicitly taught. Learners may not automatically apply what has been learned elsewhere.
- Teachers need to provide good instruction of a range of meta cognitive techniques relevant to different ages and for different subject areas. Techniques could include modelling, demonstrating, discussing, over-learning, thinking aloud, explaining their initial thoughts, chunking information and so on.
- Learners should be encouraged to **evaluate** the strengths and limits of each technique so they are better placed to identify which ones work best for them and in what circumstances. For example, what
techniques do learners have for **planning responses**? Pictures, diagrams, charts (e.g. PMI charts), annotated diagrams (to reduce the amount of writing), mind maps or key words? Do learners know how to deploy these techniques in different situations? What are the pros and cons of mind maps or notes – do they have individual preferences?
- A good way to discover what kind of errors students are making in their thinking processes is to get them to unpack their thinking, to tell you step by step how they are going about the task. By listening to how they are doing the cognitive task, an instructor can detect where the student is going wrong.
- Using peers to teach each other or cooperative learning groups provide real world opportunities for pupils to reflect on how well they have learned the subject content and strategies themselves.
- Getting groups to generate high level questions to interrogate their own learning or to set as end of module revision tests (with answers supplied) can help shine a light into the quality of their thinking

Overview

Students' beliefs about learning and their capacity to learn are essential to motivation. Attribution theory highlights that where learners believe success is based on innate fixed capacities, failure is perceived as beyond their control. However, when learners see success being linked to hard work, failure can be understood as a
result of not having the right information, skill, technique or strategy, all of which can improve with practice and guidance. Metacognition demystifies the process of learning and makes it clear where more effort will

Self-Regulated Learning

What is Self-Regulation?

Self regulation is the control we have over our thoughts, feelings and actions. Self regulated *learning* includes:

- setting goals for learning
- concentrating on instructions
- using effective strategies to organise ideas
- using resources effectively
- monitoring performance
- managing time effectively
- holding positive beliefs about your capabilities   *(Duckworth et al, 2009)*

The concept of self regulation includes the ability to concentrate, become involved in group activities, restrain disruptive and impulsive behaviour and work autonomously.

Why is Self-Regulation Important?

Self regulation skills have important benefits for learning and attainment across the curriculum. These skills can be developed and improved with appropriate teaching and support.

What do Self-Regulated Learners Look Like?

Pupils with good self regulation skills demonstrate the ability to:

- understand their own abilities and needs
- set reasonable goals for themselves
- make plans to achieve their goals
- organise behaviour, thinking and positive self-talk
- inhibit impulses
- initiate strategies at the right time
- monitor own performance and evaluate it in relation to goals
- think and act strategically and solve problems in an organised manner
- learn from consequences
- transfer skills from one context to another
- shift flexibly from one activity, thought or strategy to another

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What helps Self-Regulation develop?

- Maturation in brain, especially frontal lobes
- Stability, organisation and predictability at home
- Emotional attachment to key adult(s)
- Adequate opportunities for children to exercise control over events
- "authoritative/responsive" parenting style
- Environment that models, values and rewards self regulation, autonomy and personal responsibility
- Effective language development
- Positive adult-child interactions
- Development of coherent and positive sense of self

(adapted from Ylvisaker & Feeney, 2008)

Early Years
Attention, inhibition and working memory are the foundations of positive class-room behaviour. Interest, active participation in class and a good attention span are
positively associated with attainment.

Childhood
Self regulated learning skills can be improved with direct teaching of strategies for problem solving. Teachers can encourage pupils to develop, modify and re-flect on their own methods of learning and to make sense of the strategies employed by their peers to help promote higher levels of understanding, attainment and self
belief.

Adolescence
During this stage until the mid 20s, significant brain development takes place, allowing teenagers to consider a number of different factors when making deci-sions, increasing capacity for strategic thinking. The capacity for new learning is huge and teaching self regulated learning techniques can assist with reaching

Strategies to Improve Self-Regulation

1. Provide the right environment
Across the curriculum, focus on the process of learning and ensure that students:
- have opportunities to pursue goals they find meaningful
- have choices over activities
- are facilitated to demonstrate initiative
- can engage in challenging and collaborative learning experiences
- can make their own decisions

In this context, even low achieving students exhibit relatively high levels of self efficacy, believe they can learn and do not shy away from challenging tasks.

2. Model the behaviours you want to see
Model self control and self regulation in your own words and actions within a classroom situation.

3. Teach strategies students can use independently
E.g. mind maps, work plans, learning contracts.

4. Provide structure and predictability
Children with self regulation problems are more likely to demonstrate uncon-trolled behaviours if they are given too much freedom and flexibility.
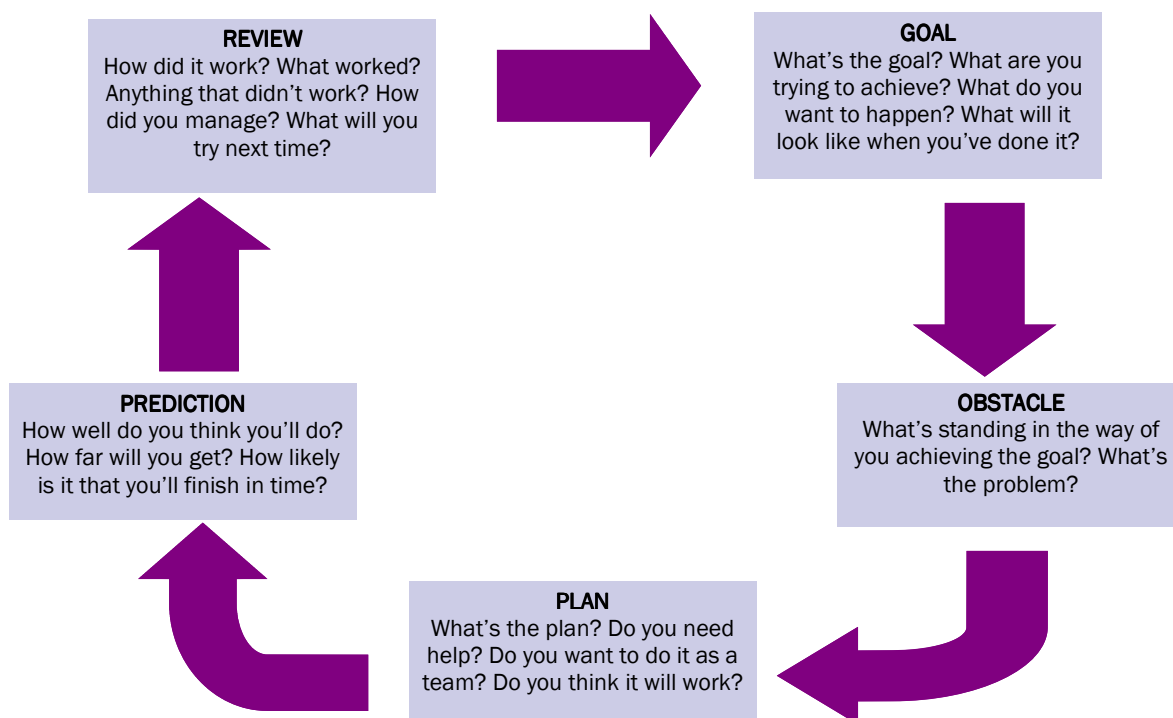
Strategies to improve Self-Regulation

5. Scripts

Using scripts is a way of giving students the words to describe the problem they are facing and how to resolve it. Adults use the scripts repeatedly, children get used to them and internalise them into "self-talk", using them to spontaneously help develop their strategic thinking over time. Scripts should be positive and used mainly under positive circumstances. The general format is:

- **Identify/label the issue:**
  This seems to be a problem　　*This is kind of scary/a big deal*　　*I think this might be hard for you*
- **State the reason:**
  It's a problem because …　　*It's scary/a big deal because …*　　*It's hard because …*
- **Offer a strategy:**
  We (or you) can do …;　that should help
- **Offer general reassurance:**
  Great; there's always something that works, isn't there?

For more specific scripts for different situations see Project Learnet online reference below.

6. Teach students to review learning

REVIEW
How did it work? What worked? Anything that didn't work? How did you manage? What will you try next time?

GOAL
What's the goal? What are you trying to achieve? What do you want to happen? What will it look like when you've done it?

PREDICTION
How well do you think you'll do? How far will you get? How likely is it that you'll finish in time?

OBSTACLE
What's standing in the way of you achieving the goal? What's the problem?

PLAN
What's the plan? Do you need help? Do you want to do it as a team? Do you think it will work?

For further information:

Duckworth, K., Akerman, R., MacGregor, A., Salter, E., & Vorhaus, J. (2009). *Self regulated learning: a literature review.* London: Centre for Research on the Wider Benefits of Learning.

http://www.projectlearnet.org/tutorials/sr_ef_routines.html

Ylvisaker, M., & Feeney, T. (2008). Helping children without making them helpless: Facilitating development of executive self regulation in children and adolescents. In V. Anderson, R. Jacobs, & P. J. Anderson (Eds.), *Executive functions and the frontal lobes* (pp. 409-438). New York: Psychology Press.

Zimmerman, B. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner, *Handbook of self-regulation* (pp 13- 35). San Diego: Academic Press.

Educational Psychology Service
West Lothian Civic Centre
Howden South Road
Livingston
EH54 6FF
01506 283130