RAY ACADEMY TRUST

Learning Policy - Thoughts on How Learners Learn

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RAY ACADEMY TRUST LEARNING POLICY

Thoughts on how learners learn and implications for schools and teaching

These thoughts are not original to RAY Academy Trust, they are the synthesis of the past and continuing work of many educationalists, researchers and writers. We believe that all our teachers and leaders should be aware of such knowledge and its implication for learning and teaching in our schools.

Learning philosophies and teaching methods

Active learning

In active learning teaching strives to involve pupils in the learning process directly. To learn, pupils must do more than just listen: They must read, write, discuss, or be engaged in solving problems. It relates to learning as knowledge, skills and attitudes. Pupils must engage in higher-order thinking tasks such as analysis, synthesis, and evaluation. Active learning engages pupils in two aspects – doing things and thinking about the things they are doing.

Pupils must be doing things and simultaneously think about the work done and the purpose behind it so that they can enhance their higher order thinking capabilities.

Collaborative learning

Collaborative learning is when two or more people learn or attempt to learn something together. People engaged in collaborative share their knowledge and skills - asking one another for information, evaluating one another's ideas, monitoring one another's work, etc. Learners engage in a common task where each individual depends on and is accountable to each other. Collaborative learning is commonly illustrated when groups of pupils work together to search for understanding, meaning, or solutions or to create an artefact or product of their learning. Collaborative learning activities can include collaborative writing, group projects, joint problem solving, debates, etc.

Didactic teaching

The teacher gives instructions to the pupils who are mostly passive listeners. It is a teacher-centred method of teaching and is content oriented.

The teacher gives instructions, commands, delivers content, and provides necessary information. The pupil activity involves listening and memorisation of the content. It is incumbent on the teacher to ensure delivery and content hold the interest of pupils and avoid a monologue process that hinders learning.

Facilitator of learning

The teacher creates tasks or uses the environment for pupils to learn from. Pupil learning is facilitated through engagement and guidance.

Mastery learning

Mastery learning (initially called "learning for mastery") maintains that pupils must achieve a level of mastery (e.g., 90%) in prerequisite knowledge before moving forward to learn subsequent information. If a pupil does not achieve mastery in an assessment, they are given additional support in learning and reviewing the information and then assessed again. This cycle continues until the learner accomplishes mastery, and they may then move on to the next stage.

The challenge is providing enough time and employing instructional strategies so that all pupils can achieve the same level of learning.

The assumption is pupils can attain a high level of learning capability if:
Instruction is approached sensitively and systematically
Pupils are helped when and where they have learning difficulties
Pupils are given sufficient time to achieve mastery
There is some clear criterion of what constitutes mastery.

There is the question of those pupils that learn more quickly being effectively held back in their learning. Pupils that struggle must be given additional support but those that learn quickly should be allowed to learn more – an argument for differentiated teaching.

Rote learning

This is essentially a memory technique based on repetition. The idea is that one will be able to quickly recall the material the more one repeats it. Rote learning is widely used and particularly important in the mastery of foundation knowledge - phonics in reading, multiplication tables in mathematics, basic formulae, etc.
Rote learning does not enable comprehension or understanding of complex issues or material.

All the philosophies above have practical advantages and disadvantages. The absolute imperative is to choose the best one for your intended objectives.

Lessons need not be in either one or another style. For example, a lesson might start with didactic teaching to give an overview of content and explanation of how something works. Pupils might then engage in active learning or collaborative learning to develop

understanding. Basic multiplication tables might require some form of rote learning, solving long multiplication might require didactic teaching and a mastery learning approach, whilst problems requiring the application of multiplication might require active learning.

RAY view –a range of methods are used as appropriate to the learning being sought. Wherever possible learning tasks, lessons, should be differentiated to ensure tasks match the requirements of groups within a class. A more appropriate task match to pupil need leads to greater learning.

Development

Piaget's stages of cognitive development

Humans go through distinct stages of cognition (ability to think) that are roughly age determined:

<u>Sensorimotor Stage from birth to about 2 years of age.</u>

Information is gathered by the senses, children are very active in constructing understanding of their world through first-hand experience exploring everything.
First habits are developing and working memory develops. Object permanence is being developed - ability to see things in their mind when the object is not physically present.
They are egocentric.

<u>Preoperational Stage from about 2 to around 7 years of age.</u>

Words begin to symbolise objects, actions and ideas. Children are very curious, they explore, they learn through play including pretend play.
They have not developed logic and they are still egocentric. They cannot see from someone else's point of view
They have not developed 'conservation'.

<u>Concrete Operational Stage from roughly 7 to 11 years of age.</u>

Children understand conservation and develop logic. They can rearrange their thoughts and use reasoning. Can more readily apply their abilities.
Children begin to know themselves as unique and can put themselves in others shoes. They become less egocentric.

<u>Formal Operational Stage about 12 years old and onwards.</u>

Begin to think rationally about abstract concept. The can understand their own identity and develop moral reasoning and philosophy.

Implications:

- Gives guidance to how we plan the curriculum and lessons to support learning and what our expectations of pupils to understand our instructions and questions in social situations as well as subject knowledge acquisition.

Language Predisposition

Each child is born with the strong predisposition to learn language in a particular natural way. To release this language potential virtually all that a child needs is plenty of opportunity to hear people talking and be encouraged to join in. This language predisposition will be neurologically pruned by the age of 4 or 5 and has almost disappeared by age 7. Language is the main means by which we communicate and learn

Implications:

- Talk [language] and conversation are of enormous importance from a very young age - our curriculum and structures must enable and promote this in all classrooms.
- Technical language can, indeed must, be encountered from an early age and consistently used.
- Our early years' curriculum must be founded on providing opportunities for language development through play and social interaction with adults and peers.
- We must reach beyond the school to the community to encourage and engage family talk. It is particularly important to get the message about talk to families with pre-school children.
- We must start additional language teaching as early as possible.

Social skills Predisposition

Humans are predisposed to friendliness within their kin group. Young children have an innate desire to play in social, collaborative, problem-solving ways. Predispositions towards empathetic activity is at its strongest below the age of 6. Failing to provide young children with supportive and nurturing environments where they can develop their predispositions towards social and collaborative skills may result in young children's brains creating pathways for aggression. This can become the action of first response.

Implications:

- Our early years' curriculum must be founded on providing opportunities for social collaborative development through play and social interaction with adults and peers.
- We must reach beyond the school to the community to encourage families with pre-school children to see the importance of collaborative play.
- We must provide opportunity for extended family to engage in collaborative play.

Cognitive Apprenticeship

Learning is a collaborative problem-solving activity that occurs through progressive construction of individual knowledge. This takes place in a social context with the learner being apprenticed by a knowledgeable adult.

The learner is motivated to do a task - another person models a task that the learner finds significance in - the other person scaffolds for the tasks the learner finds difficult - there is progressive removal of scaffolding - there is dialogue about the process.

The process has been successfully completed when the learner has developed metacognition – can reflect on their own learning.

Implications:

- Learning is socially constructed and talk is a process for learning.
- This learning process is appropriate for individuals learning specific aspects and generally 'growing up'.
- Younger children have greater dependency on the knowledgeable adults
- Children need to be given increasing social and personal responsibility and helped to accept and succeed with it.
- Activities that promote metacognition such as encouraging self-reflection must be common place in all learning situations.

Brain Plasticity

The more we use our brains in the naturally evolved ways, the more it becomes useable. The most effective learning strategies are those that build on and extend the natural predispositions. Predispositions are latent potentials – if the environment is not appropriate they do not develop.

Implications:

- If we are naturally predisposed to social collaborative learning through language we should provide this opportunity through our curriculum with facilitated group work being a major teaching structure.
- Collaboration and talk between adult and pupil, pupil and pupil must be a major feature of lessons.

Teacher Expectations

Teachers' expectations have an extremely powerful positive or negative effect on learning. Low expectations result in underachievement. With high expectations the opposite happens – it builds confidence and self-esteem, a 'can do' attitude, and there is the greater likelihood of success. How we view learners and how they think we view them can have a profound effect on their learning

Implications:

- We must have and portray high expectations of all pupils
- All pupils must be expected to succeed
- We can all say we have high expectations but it is easy to say and far more difficult to portray. The culture of a school must demand high expectations through it's actions.

Growth Mindset

A person with a growth mindset portrays the following traits that leads to continuous learning and improving achievement through a desire to learn:

- They embrace challenges
- Persist in the face of setbacks – show perseverance
- See effort as a way of mastering something
- Learn from criticism
- Learn from others success

Implications:

- Our learning environment, curriculum and teaching need to encourage these traits right from the time pupils enter school. One of the greatest dangers to pupils achieving a growth mindset is giving pupils pointless praise.
- As teachers we must avoid setting ourselves up as judges of our pupil's intelligence. Neither should we praise intelligence and 'goodness'. We should praise effort not ability and specifics not generalities.

Learning and teaching

When the brain learns

The brain learns when it is trying to make sense. When it is building on what it already knows, when it recognises the significance of what it is doing: when it is working in complex, multiple perspectives.

Implications:

- The learning environment must be stimulating
- Learning takes place when learners have to think and reflect
- Learning takes place naturally and can be accelerated by direct teaching and the creation of situations that promote learning
- Play provides excellent conditions in which the brain learns
- Closed questioning inhibits learning: it is simply a form of memory assessment; open questions promote thinking and learning
- New knowledge must be related to what is already known

- Intrinsic motivation is a key factor to learning something new. So the significance to pupils is important – teachers should establish (sell) the purpose of lessons.

Schema

A schema can be described as a mental structure of preconceived ideas, a framework representing some aspect of the world, or a system of organizing and perceiving new information. We begin to construct them from birth based on the interactions we experience, to help us understand the world.

People can organize new perceptions into their existing schemata quickly as most situations do not require complex thought when using schema, since automatic thought is all that is required.

Schemata influence attention and learning: people are more likely to notice things that fit into their schema. New information that falls within an individual's schema is easily remembered and incorporated into their worldview.

Schemata have a tendency to remain unchanged, even in the face of contradictory information. They can influence and hamper the learning of new information. A common reaction is to simply ignore or quickly forget the new information. However, when the new information cannot be ignored, existing schemata must be changed or new schemata must be created.

Implications:

- It is easier for pupils to learn something new that fits in with existing schema (knowledge) and how they think. Putting time into helping pupils connect new ideas with known knowledge is worthwhile.
- There is danger of no learning taking place if there is no connection of new knowledge with known knowledge.
- We need to help pupils see links in knowledge to strengthen schemata. Diagrams are good for this and aid metacognition.
- There is little point teaching a concept that is dependent on another concept if the latter is not known by the pupil. The gap should be addresses first.
- Mental structure suggests perhaps a net, holes in the net – gaps in knowledge or misconceptions - need to be fixed for the structure to work to best effect. This can be achieved through more scaffolding for particular learning. It does not imply the rest of the mental network is an issue.

Relevance

Learners need to feel that what is being taught is relevant to their own purposes. This relates to another aspect of metacognition, the process of being aware of and in control of

their own knowledge and thinking. Learners control their own learning and in order to reflect on the meaning of what they are learning they must be committed to it.

Implications:

- We must establish with pupils why something is being taught and its benefits
- Time needs to be allowed for reflection
- An Assessment for Learning process/approach in lessons improves metacognition and aids learning – establish relevance, criteria and what success looks like; use higher order questions; give specific feedback; enable self and peer assessment

Calibration

Learners learn through a process of first being exposed to new knowledge and then attempting to make sense of that new knowledge in terms of their existing knowledge. This is calibration.

Implications:

- The link between new and old knowledge must be established by the teacher
- We need to refer to existing knowledge before introducing new knowledge – at the beginning of a lesson
- Back reference when assisting pupils to make sense of new knowledge

Metacognition

Metacognition describes the processes involved when learners plan, monitor, evaluate and make changes to their own learning behaviours. Metacognition has two dimensions: metacognitive knowledge (what learners know about learning) and metacognitive regulation (what learners do about learning). There are 3 metacognition phases – a cyclical reflection on planning – monitoring – evaluating (Self-Regulated learning).

Self-regulated learners are aware of their strengths and weaknesses, and can motivate themselves to engage in, and improve, their learning. Developing pupils' metacognitive knowledge of how they learn—their knowledge of themselves as a learner, of strategies, and of tasks—is an effective way of improving pupil outcomes.

Implications:

- Teachers should support pupils to plan, monitor, and evaluate their learning.
- Explicitly teach metacognitive strategies through teachers modelling their thinking by verbalising their metacognitive thinking as they approach and work through a task.
- Challenge at an appropriate level is crucial to allow pupils to develop and progress their knowledge of tasks, strategies, and of themselves as learners. Pupils must have the motivation to accept the challenge. However, tasks should not overload pupils' cognitive processes, particularly when they are expected to apply new strategies.

- As well as explicit instruction and modelling, classroom dialogue can be used to develop metacognitive skills. However, dialogue needs to be purposeful, with teachers guiding and supporting the conversation to ensure it is challenging and builds on prior subject knowledge.
- Teachers should explicitly support pupils to develop independent learning skills.
- Carefully designed guided practice, with support gradually withdrawn as the pupil becomes proficient, can allow pupils to develop skills and strategies before applying them in independent practice.
- Pupils need timely, effective feedback and strategies to be able to judge accurately how effectively they are learning.
- Metacognition shouldn't be an 'extra' task to do but should be built into activities.

Zone of Proximal Development

Knowledge of ZPD is important for direct teacher assisted learning and when setting tasks for independent work. Learning takes place in the zone of proximal development – the gap that exists between the pupils' performance without assistance and performance with assistance. The components of assisted performance are internalised becoming the learners' performance.

Implications:

- Judging where to pitch work is very important - not far enough ahead then little/slow progress.
- Too far ahead, no connection with the new knowledge then little progress.
- Independent work should be close to existing knowledge
- Teacher led work should be further from existing knowledge
- Tasks must be challenging but achievable with effort
- Precise spoken language in assisted learning is of extreme importance

Cognitive load

Cognitive load refers to the effort being used in the working memory. There are three types of cognitive load: intrinsic, extraneous, and germane.

Intrinsic cognitive load - the inherent level of difficulty associated with a specific instructional topic. All instruction has an inherent difficulty associated with it.

Extraneous cognitive load - generated by the manner in which information is presented to learners and is under the control of the teacher. This load can be attributed to the design of the lesson and instructional materials.

Germane cognitive load - the processing, construction and automation of schemas. The work put into creating permanent stores of knowledge.

Working memory is a finite resource and has to handle all 3 types of cognitive load at the same time. To maximise learning teachers need to be aware of the balance between the types of cognitive load. Heavy cognitive load can have negative effects on learning.

The format of instructional materials can limit learning by having a split attention effect. It is beneficial to decrease extraneous cognitive load by reducing distraction thus allowing the learner's attention to deal more readily with the intrinsic demand of the task and the germane cognitive load (schema construction). When intrinsic and/or germane load is high (when a problem is difficult), lessons and tasks should be designed so as to reduce the extraneous load.

Individuals differ in their processing capacity. For example, there are individual differences in processing capacities between novices and experts. Experts have more knowledge or experience with regard to a specific task which reduces the cognitive load associated with the task. Novices do not have this experience or knowledge and thus have heavier cognitive load.

Working memory and cognitive load

The components of working memory are in place at 6 years of age. However, children lack general knowledge, and this creates increased cognitive load. Children in disadvantaged homes often experience even higher cognitive load in learning environments. When it comes to learning, their lack of experience with numbers, words, and concepts increases their cognitive load.

As children grow older they develop better processes and capacities. They also develop metacognition, which helps them to understand their own cognitive activities. Lastly, they gain greater content knowledge through their experiences. These elements help reduce cognitive load as they develop.

Indications of working memory failures include incomplete recall, failing to follow instructions, place-keeping errors and task abandonment.

Reducing cognitive load

Intrinsic cognitive load can be reduced by breaking down the subject content, sequencing the delivery so that sub-tasks are taught individually before being explained together as a whole. The idea is to not overwhelm a pupil too early on in the introduction of new work.

Extraneous cognitive load can be reduced by the way in which instructions are presented. Because we make sense of new material by referencing schema or mental models of pre-existing knowledge a lack of clarity in instruction puts too high a load on the working memory. Too much time is spent problem-solving the instructions as opposed to new schema formation. For example, lessons that use the electronic whiteboard with excessive writing and the teacher talking at the same time, can inadvertently generate excessive cognitive load and lead to working memory failures.

The split-attention effect occurs when different sources of information discussing the same topic are separated by time or space, such as a diagram with a key that corresponds to separate text next to it. When information is presented in this way, it is left to the learner to attempt to amalgamate it, which generates extraneous cognitive load. If one of the sources adds nothing new, it should be eliminated. If it is essential to include both sources, they should ideally be physically integrated (e.g. texts and diagrams combined).

Examples of avoiding cognitive overload:

- Break down subject content when introducing new topics and pause regularly to check understanding.
- Present instructions clearly without using too many sources of information at the same time.
- Be wary of reducing cognitive load too much – the learning process should be manageable, but not overly fragmented.
- Break complex problems down – pause for practice between individual problem types
- Example-problem pairs – give a worked example alongside an almost identical question
- In maths, start with worked-out examples (where a full solution is shown, which pupils then have to apply to a new question), then moving into completion assignments (where a partial solution is given and they have to complete it themselves), and then moving to conventional tasks, where they are simply given the question. This acts as a form of scaffolding, which helps pupils to learn independently, without necessarily needing the help of their teacher for each stage.

A good teacher whiteboard (slide) presentation should:

- Remain mindful of the intrinsic load of the task
- Reduce extraneous load, increase germane load.
- Less is more. Reduce the amount of text and diagrams to as few as necessary, but no fewer.
- Ensure that labels are integrated into diagrams and ensure that information is presented in close physical proximity to related information.
- Avoid reading out text that is already written on the slide (unless the pupils are unable to read it independently). Avoid reading aloud text that is written on the board or a

slide. This overloads working memory because pupils cannot process two types of language input simultaneously.

- Remove distracting or superfluous images. Only use those that directly support learning, because unnecessary images create extraneous cognitive load.
- Use images to support complex and conceptual ideas. Presenting language and images together enhances learning.
- If you intend to explain an image, it is best not to include written text at the same time (especially when you intend to be brief). Again, this can create extraneous load.
- Never expect pupils to read something from the board while you are talking at the same time. It is not possible to split attention between both.
- Reveal processes stage by stage on the same slide, rather than on consecutive slides. This way, pupils have a prompt to remind them of earlier stages and do not have to juggle too much information in working memory.
- Remember that spoken words and slides are fleeting and transient and that your pupils' innate cognitive architecture means that they will be unable to hold on to them all at once. Handouts and shortened 'bursts' of teaching can reduce this problem.

Scaffolding

Scaffolding from the teacher is intended to aid/improve pupil learning. Scaffolding involves presenting learners with guidance that moves them towards their learning goals. Providing guidance is a method of moderating the cognitive load of a learner.

A higher level of guidance is required for complex tasks because these types of task have a higher cognitive load; problem solving for example.

With complex tasks having multiple types of guidance (i.e. worked examples, feedback) can cause them to interact and reinforce each other.

High levels of guidance does not guarantee more learning because certain types of guidance can be extraneous to the learning goals or the modality of learning. If guidance is not appropriate to the learning it can negatively impact on learning, as it gives the learner overwhelming levels of information. However, appropriately designed high levels of guidance, which properly interact with the learning, is more beneficial to learning than low levels of guidance.

Types of scaffolding:

Giving feedback; concise advice on misconceptions as in excellent Assessment for Learning practice.

- Giving hints; giving clues and suggestions but deliberately not giving the full solution.
- Asking questions to aid thinking. This is often over-used, mimicking an assessment rather that aiding learning.

- Using exposition; the teacher explaining how to do, what to do or why something must be done. This is an effective form of guidance often under-used.
- Giving explanation; teacher providing more detailed information to clarify.
- By modelling; providing behaviour to be imitated, e.g. behaviours, ways of considering, demonstrating skills.
- Using advanced organisers; using tools like Venn diagrams, flow charts and outlines to enable pupils to learn complex content or review concepts
- Using diagramming; mind maps for organising, representing and displaying the relationships between knowledge and concepts.
- Using worked examples; most common in maths teaching use a step-by-step demonstration of a complex problem or task.

Intelligence

Learners have the capacity to develop different types of intelligence, that are not fixed, and that increase with learning:

Implications:

- Pupils have a range of abilities and these can be improved
- The curriculum needs to be broad
- Abilities can be fostered outside their 'subject'
- All aspects of our curriculum should be afforded high status

Emotional Intelligence

Being emotionally literate is important. Learning takes place through the senses as well as the mind. It happens by reflecting and analysing real experience, making connections between new and old experiences, making choices and making decisions that involve feelings and emotions as well as intellect and reason.

Implications:

- Emotional intelligence should be part of the curriculum and experienced in a structured way throughout the school.
- Opportunities for reflection can be provided in every lesson.
- We should provide a curriculum where pupils making decisions and choices is common

Memory

Memorisation for its own sake is a very difficult proposition, made easier if learners have a purpose for committing it to memory. This can be achieved by a frequent need for use or by introducing activities in the form of games etc. Memory is also aided if the aspect to be memorised is frequently revisited in short spells (spaced learning) rather than long spells of learning with long time spans between. Memorising alone is shallow learning. The ability to utilise memory and recognise connections enables deeper learning.

Implications:

- Our curriculum and timetabling need to be designed with spaced learning in mind
  - Memory of facts is very important
  - Things to be memorised must be encountered often
  - They must be introduced in novel/different ways
  - They must be reflected upon
  - They need to be of obvious use
- A range of specific memory techniques should be taught including those that enable reflection on connection such as mind mapping or spray diagrams.

Motivation

There is a strong link between emotions and intrinsic motivation. Motivated learners learn more. Learning activities must hold interest for the learner. Learning needs to be enjoyable and seen as worthwhile.

Implications:

- Learning environments must be rich and fulfilling
  - Learning should be an enjoyable activity
- Activities we give must motivate learners. At the very least pupils should be motivated by the benefits they gain from the learning activity
- We must promote a positive learning orientation - belief that effort leads to success - belief in ones ability to improve & learn - preference for challenging tasks - satisfaction from personal success and overcoming difficult tasks - problem solving and self-instructions when engaged in task
- Discourage a negative performance orientation - belief that ability leads to success - concern to be judged as able, especially to perform - satisfaction from doing better than others, emphasis on competition, public evaluation - helplessness, self negatively when task is difficult

High Challenge – Low Stress

Learning takes place in a challenging but non-threatening, supportive environment. The optimal mental state is relaxed alertness – high challenge and low stress.

Implications:

- Work needs to be challenging
  - Learners should not be afraid of making mistakes
  - The social environment must be ‘friendly’ – no put-downs

- Pupils must feel safe – physically and mentally
- Social rules must be established and consistently maintained at the school and classroom level

Self-esteem and Resilience

Learning involves taking risks. Learners need to have adequate self-esteem and confidence to feel comfortable about taking such risks. Learners whose self-esteem is eroded by negative feedback and adverse comments learn not to try. Pupils who always succeed do not build resilience. Self-esteem is promoted when challenging tasks, requiring sustained effort are completed successfully.

Implications:

- Good self-esteem is essential if pupils are going to fulfil their potential
- We need to actively promote resilience through our curriculum and the social environment we establish in classrooms
- We must not allow negative feed-back and adverse comments to undermine self-esteem
- Tasks must be challenging but achievable with sustained effort

Thinking Habits

Both good and bad habits are learnt and difficult to change. Learners need to be taught good habits and these constantly reinforced. Established bad habits are difficult to change.

Implications:

- Good habits must be constantly reinforced and not taken for granted
- We must watch out for the bad habits, help change them and never just accept them
- We need to establish accepted good habits – working routines, presentation, etc.

<u>'Habits of Mind' that we seek to encourage and enable</u>

Persisting
Managing impulsivity
Listening with understanding and empathy
Thinking systemically
Thinking systematically
Thinking flexibly
Thinking about thinking - metacognition
Striving for accuracy
Questioning and posing problems
Applying past knowledge to new situations
Thinking and communicating with precision
Gathering data through all the senses
Creating, imagining and innovating

Taking responsible risks
Thinking independently
Remaining open to continuous learning

We can encourage the development of habits of mind through:

- Teachers' general approach to communication and establishing a good working environment
- Staff consciously role modelling good habits of mind
- Teachers providing specific activities to encourage specific habits.
- The first 2 requirements can be achieved through teachers working together to ensure that they - through their demeanour, communication and way of doing - actually encourage good habits of mind.
- The school curriculum illustrated by schools' schemes and units of work lend themselves to developing 'habits of mind'. It is how teachers engage the pupils with the activities and the type of interaction they encourage through instruction and questioning that provide opportunity.

Where new activities are deemed to be required, they can be developed and assimilated into school schemes after ensuring curriculum 'progression' and 'fit for purpose' is maintained.

Assessment for Learning (AFL)

AFL is a practice that engages pupils with their own learning. It helps them to take ownership of learning goals and reflect on progress towards those goals. It aids metacognition.

Central to 'Assessment for Learning' is that it:

- Is embedded in the teaching and learning process of which it is an essential part
- Shares learning goals with pupils
- Helps pupils to know and to recognise the standards to aim for
- Provides feedback which leads pupils to identify what they should do next to improve
- Has a commitment that every pupil can improve
- Involves both teacher and pupils reviewing and reflecting on pupils' performance and progress
- Involves pupils in self-assessment

To improve the quality of assessment for learning we need to:

- Involve pupils in their learning
- Explaining clearly the reasons for the lesson or activity, in terms on the learning objectives
- Sharing the specific assessment criteria with pupils
- Helping pupils to understand what they have done well and what they need to develop
- Showing pupils how to use the assessment criteria to assess their own learning

Model quality:

- Show pupils the learning strategies and goals
- Encouraging pupils to listen to the range of pupils' responses to questions
- Showing pupils the learning strategies
- Showing pupils how the assessment criteria have been met in some examples of work from children not known to the pupils
- Encouraging pupils to review examples from anonymous pupils that do not meet the assessment criteria, in order to suggest the next steps to meeting the assessment criteria
- Using examples of work from other pupils in the class highlighting the ways it meets the assessment criteria or standards

Give feedback to pupils on their work:

- Focusing on the task, giving regularly and while still relevant
- Confirming pupils are on the right track and stimulating the correction of errors or improvement of a piece of work.
- Giving suggestions for improvement and act as "scaffolding" i.e. give pupils as much help as they need to use their knowledge. Do not give the complete solutions as soon as they get stuck so that they must think things through for themselves
- Help pupils find alternative solutions if simply repeating an explanation continue to lead to failure
- Give feedback on progress over a number of attempts rather than feedback on performance treated in isolation
- Oral feedback is usually more effective than written feedback
- Give pupils the skills and confidence to ask for help

Develop self-assessment and peer assessment

In self-assessment:

- Help pupils reflect on their own work
- Support pupils to admit problems without risk to self-esteem
- Given time to work problems out
- Help pupils understand the criteria or standards that will be used to assess their work
- Give pupils the ability to make judgements about their work in relation to these and any feedback from the teacher
- Help them work out the implications of this for future action.

For peer assessment:

- Give pupils the ability to explore each other's work to allow them to see different ways of tackling the same task and, as a result, extend their own repertoire
- Help pupils work with others to look at a range of imperfections and misconceptions through which they can explore their own understanding and misunderstanding
- Help pupils to become clearer about their own expectations through trying to explain strengths and weaknesses to others. This may result in the learning of new and more efficient strategies

Talk

Talk is key to learning. It aids all aspects of personal development – social, imaginative and intellectual.

Crucially, children need to be engaged in talk not merely learn through listening to teachers talk. A pupil being engaged in talk is achieved through creating situations in which children discuss ideas and issues, where they are involved in joint problem solving and decision making. Peer assessment encourages talk about learning and talk is a process for learning. Active participation rather than being a passive recipient is required.

Children construct meaning through interactions with others in different contexts and with different experiences – they personally construct their own knowledge. As teachers we enable connection between what is 'already known' by children and 'new' knowledge. Our goal is to have appropriate talk in all lessons.

Considering its importance, we all have to be good at talking. Teachers have to have high functional competence –clearly and precisely express points of view and convey information to a wide variety of audiences. We also have to enable our pupils to be increasingly functionally competent speakers. This includes encouraging and developing the use of standard spoken English in appropriate situations.

Precise language must be used with children regardless of the type of talk we are engaged in. We must always consider who we are talking to and pitch what we say and ask appropriately. Pupils should also learn to do this.

Questioning is a major element of teacher talk. However, it is only one element of teacher talk and can be overused. This is particularly evident at the beginning of a lesson or topic. It is often better to use exposition and demonstration rather than ask questions in a question-and-answer style. This is particularly so if 'closed' questions are asked.

It can be a mistake to ask a question instead of giving a task instruction – do not ask a pupil if they would like to do something when you actually want them to; otherwise, they can rightly refuse.

Used well, though, questioning is an excellent tool to encourage learning. Questions can:

- Encourage pupils to talk constructively and on-task
- Signal an interest in hearing what pupils feel and think
- Stimulate interest and awaken curiosity
- Encourage a problem-solving approach to thinking and learning
- Help pupils externalise and verbalise knowledge
- Encourage 'thinking aloud' and exploratory approaches to tasks
- Help pupils to learn from each other and to respect and evaluate each other's contributions
- Monitor the pupils' learning, its extent, level and deficiencies
- Deepen pupils' thinking levels and improve their ability to conceptualise

An easy classification is to say there are 2 types of question. Closed questions for which there is a single correct answer and the answer is been pre-determined by the questioner, e.g. 'What is the capital city of France?' Open Questions where a variety of responses could be acceptable and where there may be no 'correct' answer, e.g. 'How would you assess the character of …?'

Open questions demand thought and analysis. They encourage new learning and enable new knowledge. Closed questions merely seek memory recall – access to existing knowledge.

Because good questioning can aid learning encourage and help pupils become good at asking questions.