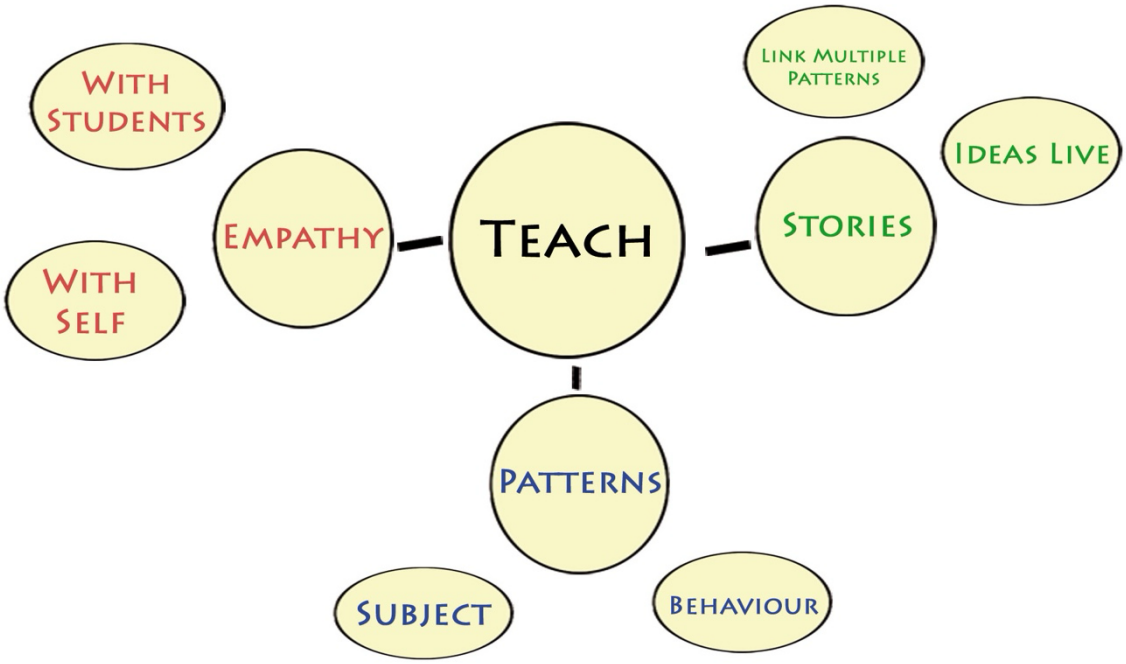
The three major components of the system

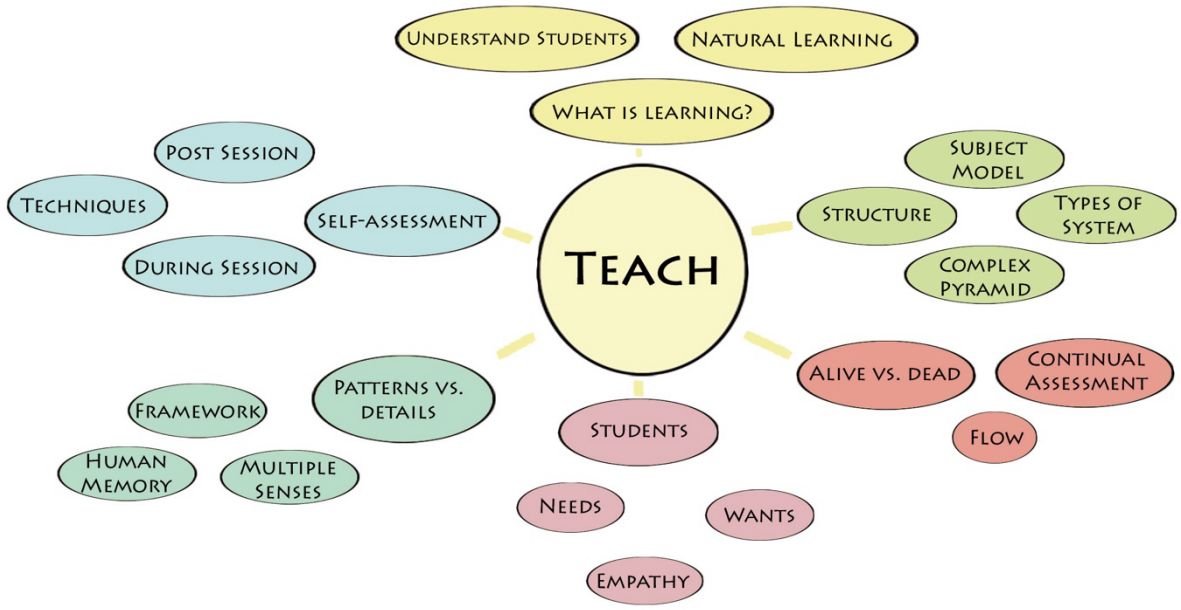


Create and maintain a bond of **Empathy** with students.

Create, use and adapt **Stories** that make ideas 'live', and create multiple links between multiple patterns.

Identify, create, adapt, and connect multiple **Patterns** that represent the contents of lessons, one's own behaviour and the behaviour of students.

Teaching



Teaching is several processes at the same time. Some factors are particularly relevant during the preparation phase, such as self-assessment and, as in the case of 'Structure', in analysing the subject or chosen methods for teaching it.

Teaching is about learning. Understanding the way natural learning takes place makes it easier to assess your methods during the planning phase and while you are teaching. The more you model your teaching methods around natural learning processes, the more effective your lessons are likely to be. The better you know and understand your **Students**, the better you can bond with them and provide them with the information they need as they need it

Self-Assessment helps you to understand what is working and what needs developing. This is both post-session (in the form of feedback and personal reflection) and by observing responses while teaching.

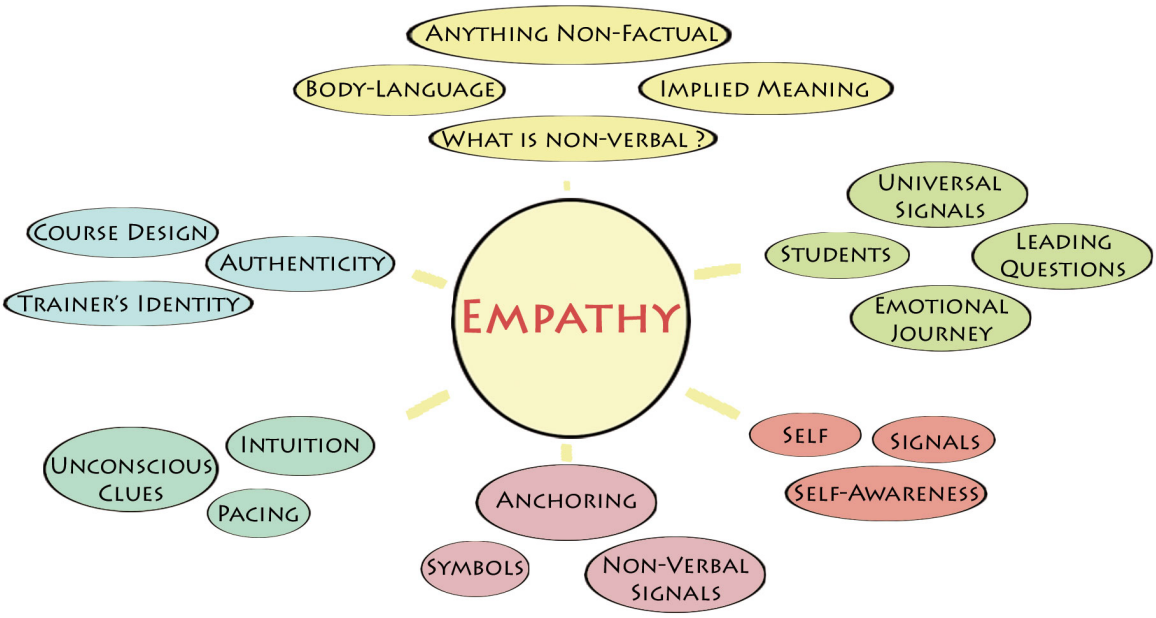
Reverse-engineering your subject will help to find its underlying **Structure** or 'model'. Examining the structure of your lessons helps to ensure there are no gaps. Subjects are commonly treated like a pyramid of understanding with fundamental simple concepts supporting 'higher and higher' complex ones. It can be fruitful to examine the various *types* of system at work in the subject you are teaching. Different 'angles' support different understandings.

Teaching your students the **Patterns** behind the subject, rather than too many details, gives them the framework to which they can attach the facts. This natural way to learn is easier than learning-by-rote. Human memory operates as a network, with ideas connected by similar themes or experiences. The more connections between subjects you give your students, the easier the subject will be to recall.

Maintaining a 'flow' during the class, or keeping the classroom '**Alive'** helps to retain focus and improves the results of training. Consider a conversation that is 'alive' compared with one that is forced and stale. It requires sensitivity and quick, natural responses to ensure a classroom stays alive.

In the following pages, you will see overlap between the various 'segments' of the total teaching system. It's worth considering the way context influences the interpretation of these ideas. Creating Structure in the context of Stories or Patterns, for example, is the same concept at different levels of analysis.

Empathy



Empathy is vital to maintaining the life of the session. Empathetic skills work in two directions: You can better understand your students with empathetic skills and you can take control of your own signals.

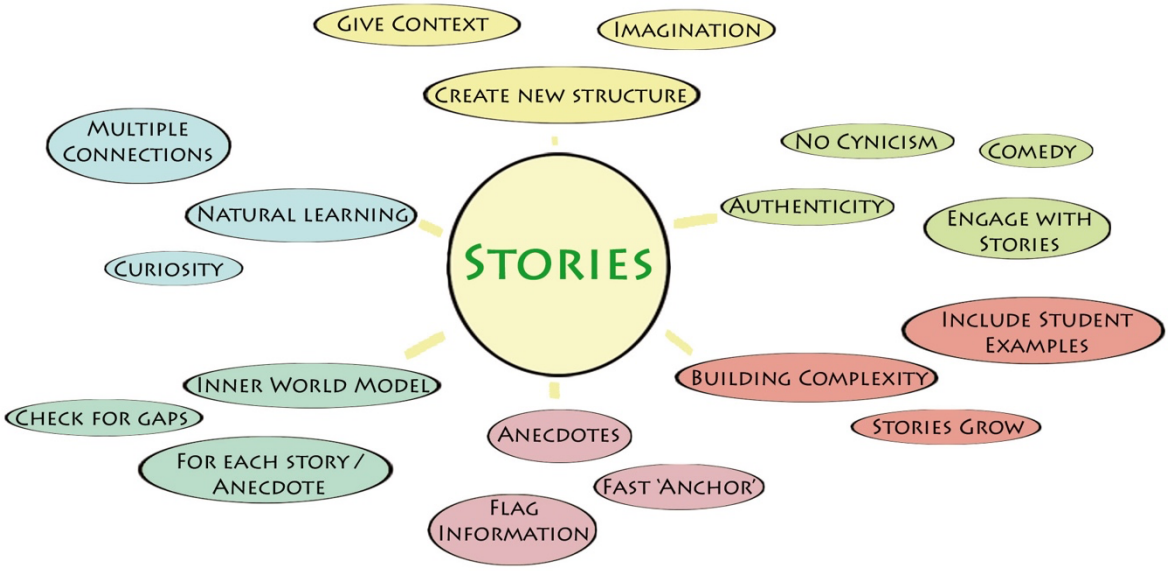
What is Non-Verbal? Anything other than cold facts is non-verbal. This includes choice of words, body-language and intonation. **Anchoring**: In its simplest form, a 'Pavlovian' response but, more subtly, can be used to associate subjects, themes or facts with any repeated pattern, such as intonation, body-language or a symbol.

Authenticity is vital for maintaining empathy with a class, during 'live' analysis (see 'the cycle') and when designing courses in response to needs, goals and environmental factors.

Some 'signals' from **Students** seem to be universal, some are uniquely individual. Techniques such as asking leading questions or simply watching students interacting and listening to your intuition help to build a deeper understanding of who you are teaching. **Intuition** is not a psychic faculty but allowing the unconscious mind to signal a pattern or clue.

Your **Self** is relevant too because, in a sense, you can have empathy with yourself – listening to your intuition and your own needs as a teacher. This type of self-awareness assists in maintaining authenticity, which is important for obtaining and retaining a strong empathetic bond with students. Becoming aware of your own non-verbal signals is often enough to manage them (without conscious effort) but one can also take the time to consciously change them. Since the greater part of human interaction is 'non-verbal', this can be very fruitful.

Stories



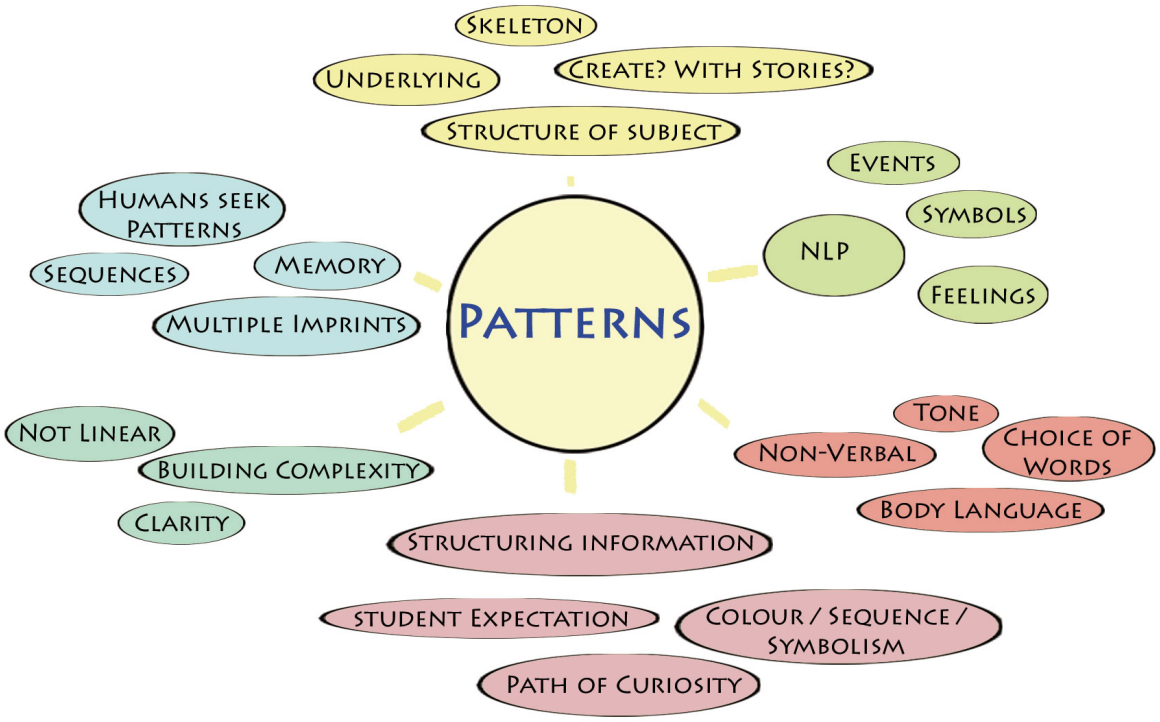
Using stories allows us to make information highly contextual and uses our imaginative faculties, which makes ideas highly accessible to students. The more we make use of narratives, the more we enable students to create multiple sensory and conceptual links between ideas – important for facilitating **Natural Learning**. The more vivid and engaging a story is, the better.

If your subject seems to have no **Structure**, using a story to illustrate it – any story – creates one. Humans unconsciously seek patterns and sometimes the pattern is more important than the content for learning. Whether you are illustrating mechanical construction techniques by referring to a family of travelling dragon flies or offering highly contextual real-world case-studies, the same learning mechanisms are used.

An **Anecdote** is often more effective than a full blown story as it allows you to 'flag' a small piece of information as noteworthy for the unconscious 'memory-making' system without taking too long about it. While you are using stories, it's important to remain **Authentic** and avoid cynicism. The more a teacher can engage emotionally with the content of a story, the more convincing and important it will seem for the unconscious mind of listener – which is the part of the mind we are really interested in.

The **Inner World Model** provides a helpful approach to both the construction of courses and the measurement of developing understanding in students. By checking if students will have / have a complete 'model' of the subject matter, one can see gaps or weak areas. Stories create models too and allow you to **Build Complexity** in stages. As the subject becomes more advanced, an accompanying narrative can develop complexity hand in hand with it. This is such an elegant way of approaching teaching, most people do it unselfconsciously. Our goal is to make these processes conscious, become aware of their effect in a learning situation and allow them to become unconscious again in order that highly effective stories 'come to mind' with little effort.

Patterns



Teaching patterns is more efficient than teaching facts and figures. The student should do the work of assigning details to a clear structure, rather identify the connections between disparate facts. This allows students to use natural learning mechanisms. Understanding the underlying patterns in your subject, your behaviour, your students behaviour and the way you structure your sessions will help you finesse your teaching by making it more like 'automatically knowing' and less like struggling to remember.

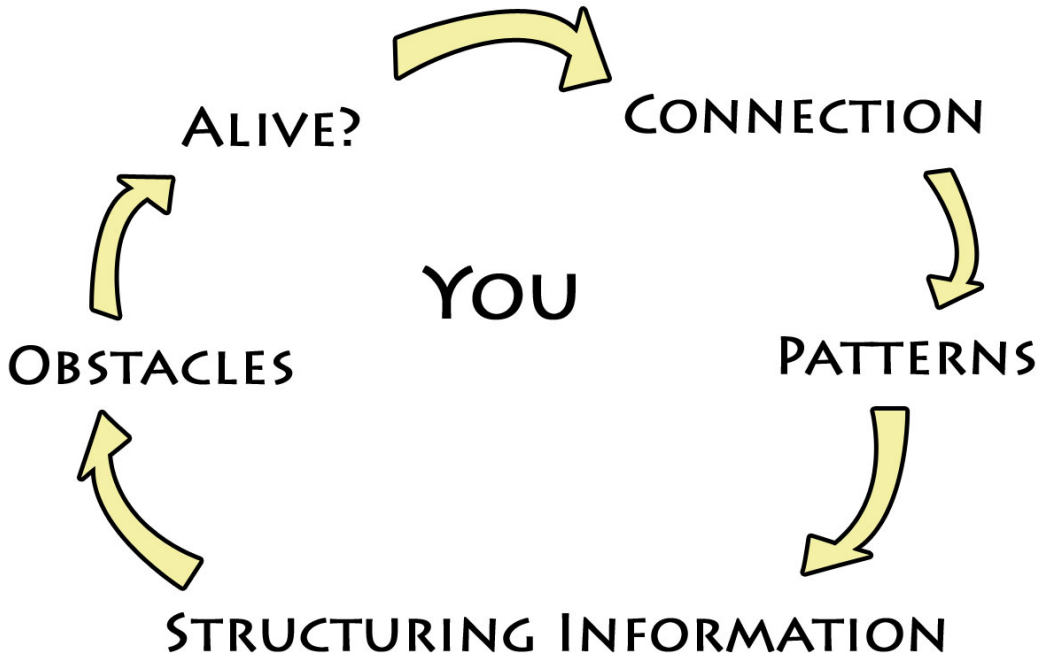
Every subject has a **Structure**, even if that structure is free-form and potentially ambiguous – like human emotion. Identifying the underlying structure of your subject and making it one of the first things you teach will improve knowledge retention as it gives the beginnings of a framework or skeleton to which students can attach a body of new ideas. It also helps to avoid missing important details when constructing a course, particularly important when dealing with technical subjects where a level of knowledge is assumed (and occasionally falsely presumed).

The more consistently ideas fit into patterns, the easier it is be to place them in **Memory**. Our goal is to create firmly imprinted memories that have multiple links between them for easy access. Neuro-Linguistic Programming, or **NLP**, has a great deal to say on the subject of memory, including ideas like anchoring (connecting memories to events, images, or feelings) and the use of pattern behaviour such as changing voice tonality or making subtle **Non-Verbal** gestures. Much communication is non-verbal and this should not be excluded from your examination of the patterns you are dealing with.

It's obvious that teaching should start simple and build up to complexity but this does not have to be a linear progression. It may be more natural to go from simple to complex and back again, allowing students to take each idea as far as they feel they are ready to before moving on to some other idea.
When **Building complexity** 1) ensure your simple concepts are clearly understood before 'building' ones on top of them and 2) don't be afraid to cover very complex subjects when they naturally come up.

When you are **Structuring Information**, consider building patterns into the way you teach. A classic example of this would be to ensure every story has a beginning, a middle, and an end, but not necessarily in that order. Creating an expectation of a certain structure in each module encourages a desire to learn – to have the subject 'complete' - when all the expected elements of the course have been covered.

The Five Point Cycle



To aid in remembering things to attend to *while* teaching, it may help to learn The Five Point Cycle. This is a series of questions to ask yourself to check everything is 'on track'. Run through the cycle every few minutes. You shouldn't interrupt training to think about this, instead use natural pauses, breaks or moments when students are practicing.

Start with 'Connection' and work around the cycle as follows:

Connection: Do I have a good empathetic bond with my students? Do I feel natural and authentic? Do I feel a good connection with the subject matter (if not, make a note to do some self-training in advance of the next class)?

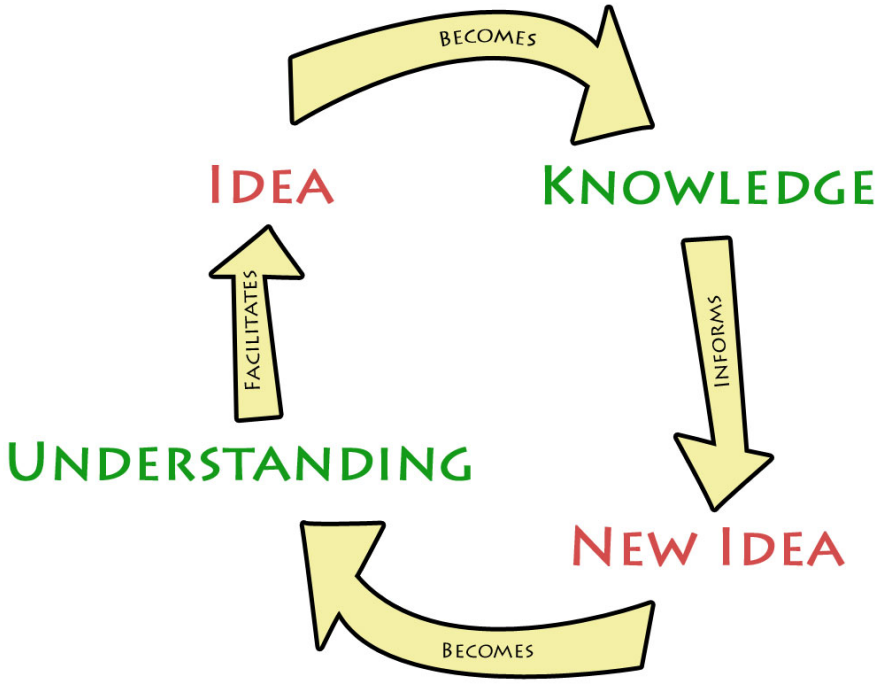
Patterns: Are my patterns working? Do the students 'get' the connections between the patterns I am giving them and the subject matter? Is there any way I can test the students grasps of the patterns I have given them?

Structuring Information: Is everyone at the same stage in their learning? Are all the foundations of the current subject 'strong'. That means clearly understood, unambiguous and properly related to the current subject. Are there any gaps in the structure? Should I raises any ideas now that will support learning in a later subject?

Obstacles: Is anything preventing me from teaching the current subject effectively? This is useful for making yourself notice outside distractions you may have been unconsciously 'blocking out'. Are there any concepts students are struggling with? Why?

Alive: Is the classroom 'alive'? This means ideas are flowing naturally, all of the above issues are in a healthy state and the students literally looking awake and alive – rather than half asleep. When a classroom is really alive, something akin to 'group mind' develops, where mutual understanding dramatically increases and ideas seed further, more advanced, ideas quickly. Students become excited and explore ideas internally, more often than not coming up with right assumptions and asking questions that naturally lead to the next level of complexity.

Foreshadowing



The idea of using Foreshadowing in a training environment is not as odd as it might at first seem. In fact, you probably use foreshadowing all the time while teaching – this diagram is a reminder that you can make conscious choices about this process too in the process of creating elegant and efficient course modules.

The **Idea** you present initially should be a simple one that can easily pass into the group of 'facts' or 'understandings' your students hold. Simplicity is key.

That **Knowledge** adds important information to a later, more complex, **New Idea**.

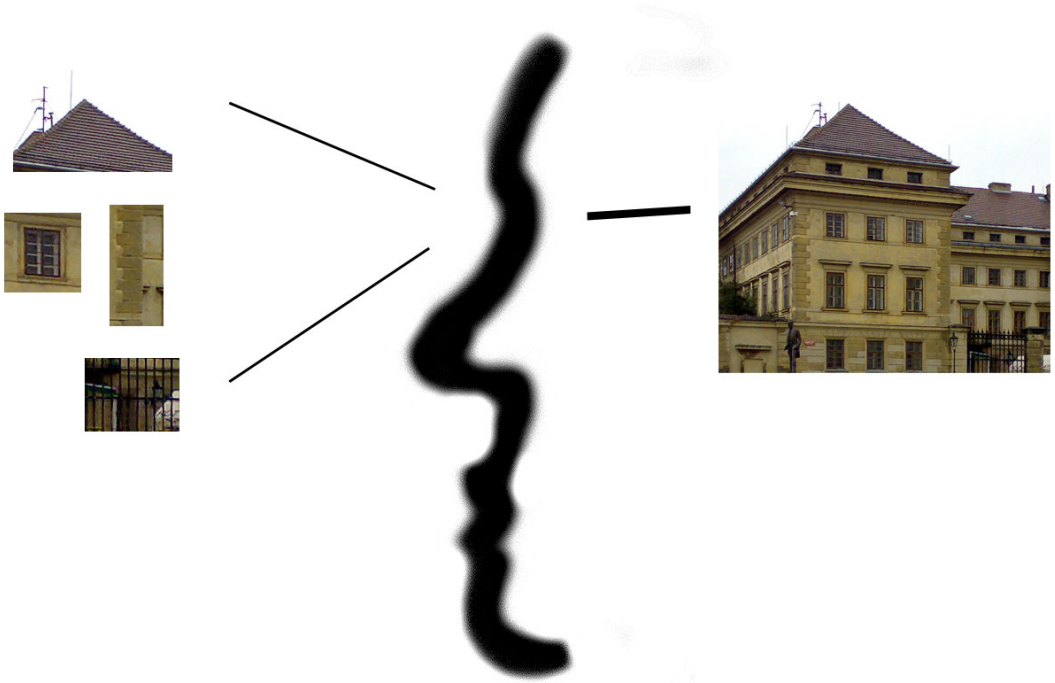
What is significant here, is that the existing knowledge comes from a different part of the brain – the mid-term memory and this makes the new idea seem 'half-known' already.

The new idea feels like a natural extension of something students already knew, when in fact it may be almost completely new and relatively complex.

That new idea becomes **Understanding**, which you can feed into another simple, clear idea that will become foreshadowing for a new idea later. The goal is to build connections been different stages in the learning process.

Note that your 'foreshadowing' idea should be very simple while the 'new idea' can be much more complex. The former assists the latter.

Inner World Model



The Inner World Model is a way of describing the relationship we have with our world. According to this model, we don't interact with the world via our senses. Instead, all the information our senses provide us with feeds into creating and updating a model of the world we hold in our minds. It is this model we actually 'know', not the world itself.

This way of viewing our relationship with reality includes everything, from what one's body is doing at any moment to the way complex ideas fit together.

The model is helpful because it gives us a way of gauging the information we give students in terms of the complete 'picture' they are building. The mind has a tendency to fill in gaps with fuzzy 'grey' information. We find it hard to think about (or even notice) missing information and often replace it with imaged information that **seems** as valid as definite known facts.

These gap-filling techniques take place in the unconscious and the conscious happily mind plays along by not noticing it is happening. Trying to notice gaps in your own knowledge can be a little like trying to look at an out of focus photograph. This model helps us to spot them.

Notes on remembering

What follows is a list of considerations when constructing memories. These are taken from 'Use your perfect memory' by Tony Buzan, Penguin Books, 1991, ISBN 0-452-26606-8.

Synaesthesia/Sensuality
Synaesthesia refers to the blending of the senses. Most of the great 'natural' memorisers and all of the great mnemonists developed an increased sensitivity in each of their senses, and then blended these senses to produce enhanced recall. In developing the memory it was found to be essential to sensitise increasingly and train regularly your: a) vision b) hearing c) sense of smell d) taste e) touch f) kinaesthesia – your awareness of bodily position and movement in space

Movement
In any mnemonic image, movement adds another giant range of possibilities for your brain to 'link in' and thus remember. As your images move, make them three dimensional. As a subdivision of movement, use rhythm in your memory images. The more rhythm and variation of rhythm in your mental picture, them ore they will be outstanding and thus the more they will be remembered.

Association
Whatever you wish to memorise, make sure you associate or link it to something stable in your mental environment, i.e. The number 1 looks like a paintbrush.

Sexuality
We all have a good memory in this area. Use it!

Humour
The more funny, ridiculous, absurd and surreal you make your images, the more outstandingly memorable they will be. Have fun with your memory.

Imagination
This is the powerhouse of your memory. Einstein said, 'Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution.' The more you apply your vivid imagination to memory, the better your memory will be.

Number
Numbering adds specificity and efficiency to the principles of order and sequence.

Symbolism
Substituting a more meaningful image for a normal, boring or abstract concept or using traditional symbols i.e. stop sign or light bulb increases the probability of recall,

Colour
Where appropriate, and whenever possible, use the full range of the rainbow, to make your ideas more 'colourful' and therefore more memorable.

Order and/or Sequence
In combination with the other principles, order and/or sequence allows for much more immediate reference, and increases the brain's possibilities for 'random access'. Examples are: little to big, colour grouping, sorting by category.

Positive images
In most instances positive and pleasant images were found to be better for memory purposes, because they made the brain *want* to return to the images. Certain negative images, even though applying all the principles above, and though in and of themselves 'memorable' could be blocked by the brain because it found the prospect of returning to such images unpleasant.

Exaggeration
In all your images, exaggerate size, shape and sound and therefore memorability.

