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## How Children Learn

A workshop with Dr Lisa Smith and Dr Jeffrey Smith

Reviewed by Rachel Thomson



**Dr Lisa Smith and Dr Jeffrey Smith**

**Drs Lisa and Jeffrey Smith, an American husband and wife team, gave us an entertaining and informative seminar on how children learn. They were quick to stress that their musical background was limited, however everything they discussed regarding learning and development had implications for us as teachers.**

We were taken through some of the major Models of Learning, such as Information Processing, Piaget's Intellectual/Cognitive Method, and Vygotsky's Socio-Cognitive Method. Looking at these models in detail gave us insight into how the brain develops and learning takes place.

There is, of course, a difference between development and learning: development is something that is a long term process involving maturation and learning through interaction. Learning, however, is something we actively seek out, such as playing an instrument.

The concept of 'play' was highlighted as a very important part of learning. Most of us have seen how a young child moves from solitary play amongst peers to parallel play, then cooperative play. When dealing with very young children, one needs to be aware there are physical considerations too: the development of gross motor skills then fine motor skills happens at different speeds, and although there is some overlap, there are gender differences! Boys have stronger gross motor skills initially while girls have greater fine motor skill control. A child with special needs may have more developmental delay in these areas. Girls are also more interested in pleasing you, while boys are more likely to take risks and experiment.

Atkinson and Schiffman's Information Processing model showed how information received on our sensory register moves to our short-term memory. From there it is either forgotten, or we rehearse/elaborate on it which leads it to our long-term memory. Then it is either forgotten or retrieved by our short-term memory when needed.

It was interesting to learn that our short-term memory is only about 10-15 seconds, as was illustrated by the example of trying to keep a phone number from an answer-phone message in our head while we hunt for a pencil! Similarly, retrieving information from our long-term memory is not always reliable, as we all know the feeling of having some information on the tip of our tongue (but only remembering what it was at 2am). New information sometimes blankets the old, and sometimes old affects the new.

'Overlearning' is a concept we use all the time. When we play a piece, we are seldom thinking of every individual finger movement (let alone every note) as these processes have become automatic through repetition. Practice is the process of rehearsal and elaboration that embeds itself in our long-term memory.

An interesting aside here related to how we retrieve information from our long-term memory. Sometimes we can be asked something and not remember the answer; but if the question is asked a different way, we can remember. The example was given of an elderly woman who said she couldn't remember anything about the hometown of her youth. However, when asked about her early childhood and family, memories came back clearly.

Another important point made was in relation to distributive practice. It has been well established now that it is best to break information into smaller units; four lots of one-hour practice will achieve more than one four-hour session. It is also important to relate information to real life experiences, such as relating an interval to a well known song (e.g., a 5th to *Twinkle, Twinkle Little Star*).

Other important learning methods which are relatively commonplace in music teaching are the use of acronyms (Every Good Boy Deserves Fruit) and rhymes. Visual aids are especially important for young children. The technical term 'chunking' refers to grouping information so you can remember it (such as dividing phone numbers into groups of 3 and 4).

Another technique is to use keywords to memorise things (such as Italian words). Make a bizarre or ridiculous association with the word, preferably with some action involved, and you are far more likely to remember it.

We were given the following "Pegword Mnemonic" to learn:

*One is a bun  
Two is a shoe  
Three is a tree  
Four is a door  
Five is a hive  
Six is sticks  
Seven is heaven  
Eight is a gate  
Nine is a line  
Ten is a hen.*

To use this, imagine you are trying to remember a list of groceries to pick up. If bread is first on your list, imagine a hamburger bun with a loaf of bread inside. If eggs are next, think of a shoe with an egg inside. Carry on in this fashion and you are much more likely to recall what you want when you get to the shops without your written list!

The Smiths' enthusiasm for their topic had us all totally entertained for the morning, and it was good to be reminded how learning can be fun. Hopefully we can all take elements of this and put it to work in our teaching this year.