

Thinking: some deceptively simple questions

This article is a short examination of a very complex issue. It aims to provide a simple overview of the relationship between learning and thinking, To do this the article considers five questions and poses some simple answers, if there can be such things, to what on the surface appear as deceptively simple questions.

Five Deceptively Simple Questions.

What is learning?

What is thinking?

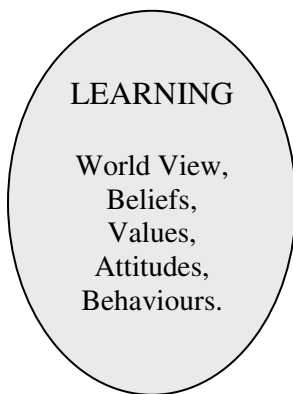
What is the relationship between thinking and learning?

What stimulates Thinking?

What is the relationship between teaching, thinking and learning?

What Is Learning?

Diagram 1: Learning



Learning is primarily a process of change. When effective it results in changes to world view, understanding, knowledge, beliefs, values, attitudes and behaviours or skills. It could be argued that effective learning may also result in affirmation or strengthening of these factors.

At this point it is important to clarify a simple definition of what is meant here by the term 'World View'. Please note that there is always a danger of minimising a concept when it is simplified, and that 'World View' is a complex concept.

However, that said, 'world view' could be described as a person's view of themselves, their family, the range of communities they participate in and the relationship of these factors to the wider world. World view is then a summation of a person's

knowledge, experiences, culture, and understanding. A person's beliefs are drawn from their world view. It is from our beliefs that we draw our values. Our values are the major source of our attitudes and ultimately much of our behaviour in any given situation is controlled or driven by our attitudes.

Learning is obviously an internal process for the individual. A change in skills or behaviour is only an outward indicator of an internal change. It is also apparent that learning is an activity that does not, and can not occur in a vacuum. Learning changes something and is caused by something. This raises a further question. What is the prime 'something' that causes learning? The answer to this becomes clearer through the next two sections.

What Is Thinking?

Unarguably, thinking is a mind process that is internal to the individual. Ultimately thinking is a process that aims to make meaning from a confusing world. It is also obvious that this internal process is one that is triggered by a range of stimuli. These stimuli can be either internal or external in nature. An effective thinker is one who can create their own internal stimuli to promote thinking. It is also fairly obvious that, commonly, the stimuli that trigger thinking are sourced from external events that impact on the individual in some way. The resultant thinking, if it is effective, will assist the individual to make meaning and will result in strengthening or changes to World View, Beliefs, Values, Attitudes, and Behaviours.

To summarise; Thinking could be defined as an internal process, triggered by a range of stimuli, that seeks to make meaning and results in strengthening or change to World View, Beliefs, Values, Attitudes, and Behaviours.

What Is The Thinking/Learning Relationship?

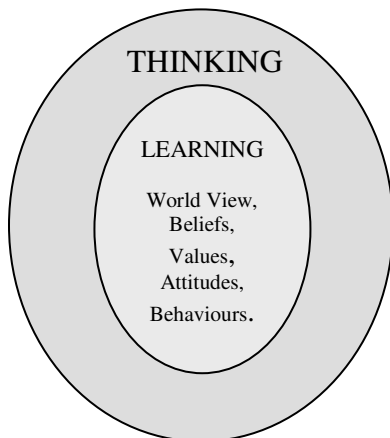
A question worth considering is the relationship between thinking and learning.

Primarily, is it thinking that fosters learning, or learning that fosters thinking?

Consideration of this would expose an interesting relationship.

It is possible to conceive of thinking that has no impact on learning, thinking that is ineffective perhaps circuitous, thinking that has no effect on strengthening or altering World View, Beliefs, Values, Attitudes, and Behaviours.

Diagram 2: Thinking and Learning



On the other hand it is very difficult to conceive of a situation where learning has occurred in the absence of thinking. It could be argued that a rote learning situation, where facts are repeated and re-written multiple times is such a situation. However the eye can not read, the ear can not hear and the hand can not write without some form of active thought. So even in the rote learning situation that targets retention, there is still some form of active thought taking place. Admittedly it is shallow thinking, and the resulting learning is also recognised as being shallow, what people like Sergiovanni and Perkins would label as 'low order learning'.

From this we can infer that thinking governs learning. It is thinking that produces learning, the better the thinking the better the learning, the richer the deeper the thinking the richer the deeper the learning. Our unanswered earlier question 'What is the prime 'something' that causes learning?' now has an answer. Thinking is the major factor that creates learning.

What Stimulates Thinking?

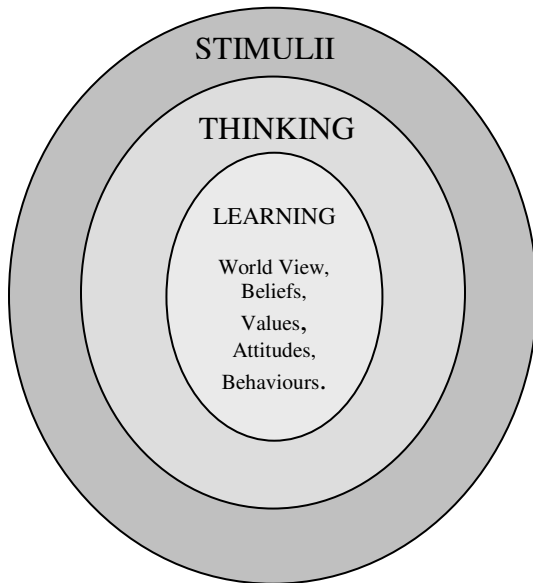
Above it was indicated that thinking is a process that is activated by a range of possible stimuli. Table 1 is a suggested list of some of the obvious stimuli that can trigger thinking. It is by no means claimed to be an exhaustive list for there are sure to be further stimuli that could be identified. The bulk of these stimuli come from outside the individual, and can be triggers to thinking. The stimuli may be experienced and the individual may or may not respond by thinking. An independent thinker is one who is not entirely reliant on external stimuli but is a person who can create their own internal stimuli for thinking. Usually this will be in the form of posing a question. De Bono argues that questioning is the engine-house of thinking, indicating that personally posed questions are a self created thinking stimuli. De Bono also suggests that questions are ultimately the major tool that differentiates an effective thinker from an ineffective thinker. It is possible to spend time thinking about something and go round in ever diminishing circles, achieve nothing,

Table 1: Thinking Stimuli

Experiences
Information
Vocabulary
Explanation
Challenges
Confirmation
Provocation
Observations
Questions
Negation
Enjoyment
Pain
Choice
Disequilibrium
Debate
Argument
Contradiction

solve nothing and make no meaning. An effective thinker is one who can pose questions relevant to the concept or problem, support these with subsidiary questions and direct their own thinking through to a successful conclusion.

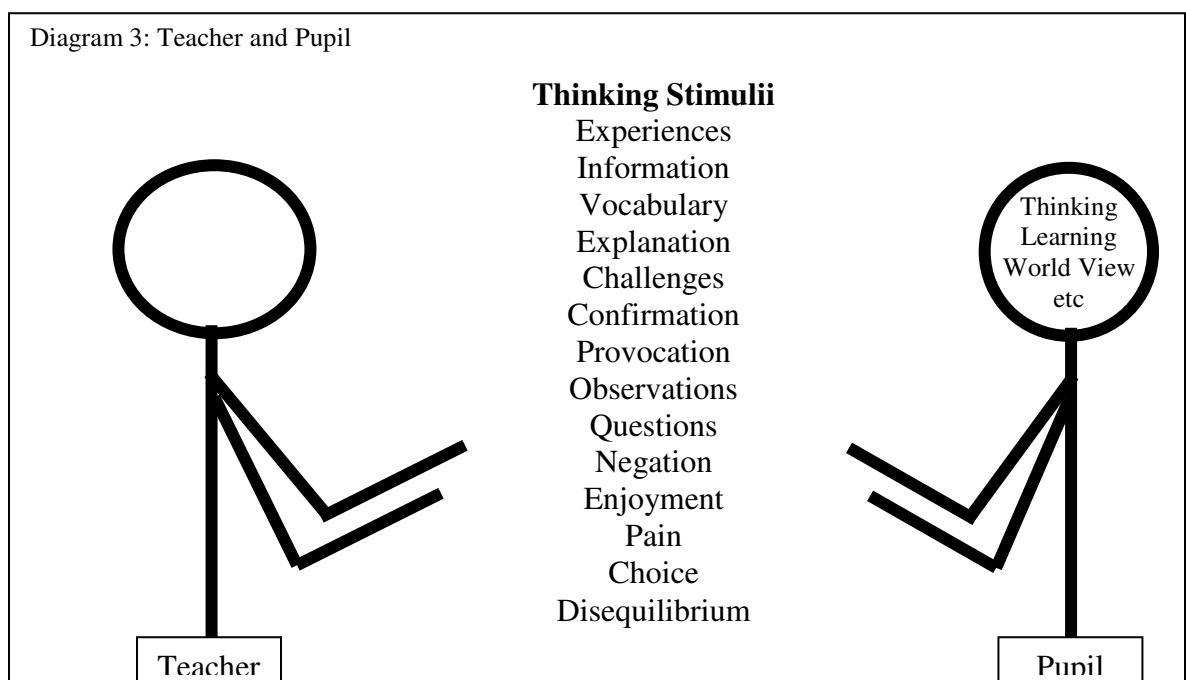
Diagram 3: Thinking Stimuli



What is the relationship between teaching, thinking and learning?

The first and very obvious observation that can be made is that thinking, learning, world view and its subsidiary factors are all internal mind factors. The second observation is that the teacher is an external factor. In the teacher/pupil relationship, the teacher has no control over the student's mind. The teacher cannot control the thinking nor then can the teacher control the subsequent learning. The very concept that 'I taught someone something' is a blatant fallacy. Learning is a personal internal process. This leads to the slightly scary conclusion that the teacher can't teach, it is the learner who learns. This conclusion raises yet a further question. What is the teacher's real role in the learning process?

The answer must surely be tied up with the relationship between teacher, an external factor, with the other external factor which is the stimuli for thinking.



A teacher can only impact on learning if they can impact on the pupil's thinking, the only way to impact on a pupil's learning is to stimulate, challenge, facilitate and provoke thinking. A good teacher will use every possible stimulus to help the pupil think in ways and about things that will ultimately create changes or strengthening in world view, beliefs, values, attitudes, and behaviours. The most powerful point of focus for our time and energy as teachers is on that of the facilitation of effective thinking.