

Printout of MindLadder® Advisor

Section B-5•



T-2: Experience of Disequilibrium

This knowledge construction function enables the learner to experience disparities or imbalances in the environment and sense the existence of incongruities or problems. An experience of disequilibrium is often the first inkling of a need to invest in the perceptual process and marshal problem solving skills. For example, a strange odor is encountered, a family pet acts in an unusual manner or the sun is shining while it rains. In the absence of this knowledge construction function students have difficulties catching on to problems. If a child is unaware that a problem exists, he will not invest any mental effort on it as there is no awareness of the need to do so (see also T-17).

Inability to experience disequilibrium does not result from a lack of attention (R-2) but is most often the result of a passive approach towards the self and the world. Such passivity is a reliable indicator of the need to develop this knowledge construction function. We recognize something to be askew by a sense of imbalance. We experience it in some way to be incomplete, to be unsteady or precarious and not to make sense. However, when a child has acquired a passive view of the self and the world he may not be affected even by strong evidence that things are awry. As a result he will not begin to look for clues, to collect information, to make connections, to engage in problem solving and to take action. In the absence of the experience of a disequilibrium, the mental act, in a manner of speaking, doesn't get cranked up. The passivity that characterizes the inadequate development of this knowledge construction function can be observed even on gestalt-like tasks that in others produce an almost irresistible urge to complete them. For example, a child seeing a nearly finished puzzle may feel no urge to position the final pieces and complete it. The child does not experience that anything is missing or wrong with the picture; that anything needs to be done. The picture is fine the way it is.

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Wonderment, amazement, curiosity, marveling, inquisitiveness and surprise all spring from this knowledge construction function. It is the playground of magicians whose tricks and sleight of hand deliberately aim to leave people aching for information and explanation.

Mediate this brain tool to enable your students to recognize that problem discovery is something that originates within their own minds. An alarm, a crying baby or an anguished face can generate a disequilibrium as can an unexpected result of a scientific experiment or a surprising geological discovery or mathematical outcome.

"You recognize that the results you are getting for this set of math problems are improbably large. The sense that something is off or wrong comes from the knowledge construction function we are talking about. You are puzzled. Something is out of order. It leads you to wonder what might be wrong and this leads you to go back to check your work. You look carefully at the signs that tell you what to do. Is this a plus sign or a minus sign? Can you see what your problem is? We need this knowledge construction function to alert us that something isn't right, that something is out of place."

Encourage your students to be active producers of information so they will be motivated to look for and create connections between experiences that may lead to their discovery of new problems. This purpose is well served by a coherent curriculum within an active and experiential classroom learning environment. Have your students come up with examples of when they have had the experience of a disequilibrium in class. You may find that students will begin to talk about things they have not understood in the curriculum and which they hitherto have been quiet about. Reinforce the role of the experience of a disequilibrium as the starting point of a sequence of mental acts that can lead to innovation, resolution and fulfillment. See if your students can come up with examples of advances, inventions or initiatives that started with the experience that something wasn't quite as it should or could be (e.g. research to find a cure for diseases, efforts to protect the environment, Habitat for Humanity).