



Use of "perceptual modalities" for a new teaching of Structural Geology and Tectonics

Valentino Straser (1), Michele Casati (2), and Gabriele Cataldi (3)

(1) Terenzo (Parma), Italy (valentino.straser@alice.it), (2) Via Valico18, Altopascio - Lucca (Italy), (3) LTPA Observer Project, Radio Emissions Project, Albano Laziale, Rome, (Italy)

In this research we want to propose an innovative teaching Method of Structural Geology and Tectonics in a modern concept of "flipped classroom" based on the three main "perceptive mode": auditive (A), kinesthetic (K), and visual (V). When we interact with a classroom or with a singular student, in order to be sure to achieve the goal is fundamental a previous check about what contents we want to transmit and how. The "how" it's about both verbal and nonverbal aspect. through the five senses the person understand the world and all the information are elaborated and developed by the brain the produce as output our personal imagine of all "out of us" and external happening. This mental representation is built thanks to the information gathered through the senses, it will be also implemented by other complementary information like imagine, word, sounds, smells and all the element that we are able to collect and percept. In this way when we think, imagine or remember, we do all these actions through mental representation in which the sense are the fundamental tool in order to acquire them. We continue to seek new information through our senses that are our bridge with the real world, and they help us to understand the external world through an active research of new information to elaborate. The perception of the reality is an indirect phenomenon because the information that we gathered are mediated both hour sense and also by personal framework of the acquisition of information. The imagines that we see are transfer from eyes to the brain passing through several areas of it, that codify and elaborate them. In this way there are both graphic developing process and an important link with the areas of brain in which are insert the elaboration of feeling and emotions. All of us use tools in order to find touchpoint with the external world, and these are liked to a five entry channel (input), also called five senses: sight, hearing, touch, sense of smell and taste. Although we have the possibilities to use whole of five, often we tend to prefer use manly one. Every one of us for a lot of time, tend to prefer, on a different level, the information coming a single sense. They could be defined as "perceptive mode" and the sense that assume the prevalent importance is defined as primary or dominant perceptive mode. The didactics od Structural Geology and Tectonics also linked the these mechanism. The didactics method could be resume in six step:

- 1 – understanding of the problem,
- 2 – Creation and a description trough a creative writing,
- 3 – Comparison among the students,
- 4 – The role of the teacher is to coordinate as a sort of moderator the different point of view through a concept of flipped classroom,
- 5 – Trip field,
- 6 – Summary of the knowledge acquired.