

Pedagogical landscape

What is the nature / texture of the learning process and the proposed activities?

VIDEO USED FOR ILLUSTRATION

Paris, Centre Pompidou

Participants were requested to introduce themselves through art works displayed in this room. They were invited to identify art works that reminded them of their origins, that they could connect to their profession and that they connect to their future. Once the artworks are identified each participant explains why they chose that particular artwork.

Short intro what is this

It may be heard to find anyone who would oppose the idea of using a “diversified” set of methods and activities. But what does this “diversification” actually mean? In what way can methods and activities fundamentally differ? The selection below offers an overview of different approaches, mainly based on recent developments from the field of educational neuroscience. The fact that these approaches are backed up by recent findings of neuropsychology does not mean that some of these techniques have not been applied for centuries, rather that new evidence still supports the benefits they may bring about. As before, it is not our objective to impose on you these approaches. Whether a trainer wishes to use one or another approach should depend on the context of her work, her own predisposition etc. Instead, we continue to offer you a mirror to explore your preferences, norms and how they become reality in your interventions.

Presentation of categories

Section prepared by Cécile Stola

- Creating a positive learning environment facilitates learning. When a person feels physically or emotionally threatened, his/her body releases a hormone called ‘cortisol’ which at long term has a negative impact on learning process and memory. Promoting a warm and welcoming classroom based on trust and respect gives more chance to

the learning to take place. In a positive learning environment, the brain is more likely to release endorphins, the hormones responsible for a sense of euphoria and pleasure and which stimulate the frontal lobes of the brain - the thinking command center. Educators need to diminish different kind of threats by monitoring classroom policies and their own behavior towards students as well as student-to-student interactions.¹

- Attention needs to be stimulated. To learn, we need to be attentive and attention is not unlimited. According to Leslie Wilson (1994) while children and adults have different attention spans, both are limited. To optimize learning, educators should switch types of tasks during timed intervals. Teaching in limited segments within a longer teaching period increases student attention and retention. For instance, in the case of older students for a 40 minutes period, their retention and attention will increase if tasks are divided into 10-20 minute segments. Preadolescents need more frequent changes at 5-10 minute intervals. Even adults have difficulty focusing and need things changed up every 15-20 minutes. Roberto Rosler (2014), who is both a teacher and a neurosurgeon, suggests presenting to learners some curious facts given that newness is attractive for the brain. The brain stem filters the sensorial information and when it perceives something new, it releases noradrenaline to awaken the brain. Thus, one can use unusual sounds or visual accessories when introducing training to participants.
- Alternating diversity of learning styles helps address heterogeneity. The concept of “learning styles” implies that most people may have a preferred way of learning, where they have more facility. Scientists and psychologists have developed a number of different models to

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understand the different ways that people learn best. One popular theory, VARK learning style model introduced by Fleming², identifies four primary types of learners: visual, auditory, reading/writing, and kinesthetic. Each learning type responds best to a different method of teaching. Auditory learners will remember information best after reciting it back to the presenter, while kinesthetic learners will jump at the chance to participate in a hands-on activity. Research on different learning models done by Hawk and Shah (2007), Shaw Warn (2009), and Bhatti and Bart (2013) confirmed that the exposure to a combination of learning styles resulted in improved student achievement. Another often cited theory developed by Branton Shearer (2011) based on the conception of multiple intelligences³, proposes eight different learning styles: the linguistic learner, the naturalist, the musical or rhythmic learner, the kinesthetic learner, the visual or spatial learner, the logical or mathematical learner, the interpersonal learner and the intrapersonal learner.⁴

- Movement keeps thinking active. In order to function at optimal levels, the human brain needs a constant supply of water, oxygen and glucose. The lack of any one of these has a negative impact on the learning process (Brinke 2015). Exercising for two minutes keeps oxygen flowing to the brain, and makes it possible for our brain to generate more neural connections. Furthermore, drinking a glass of water not only hydrates the brain, but gets the glucose and oxygen in the blood faster to the brain. Finally, eating fresh or dried fruit provides glucose, which is an essential fuel for optimal brain function.
- Positive emotional triggers facilitate retention. Brain regions dealing with emotions (amygdala) and memory (hippocamp) are very close and very connected. This is the reason why emotion has a strong impact on the learning process (including perception, attention, learning, memory, reasoning and problem-solving Tyng et al 2017). Trainers can facilitate positive emotional triggers during teaching and presenting. Making connections with students' interests, sharing anecdotes, talking about things that are relevant in daily life, these actions will stimulate emotions and improve learning capability.
- Talking about topics relevant to the learners keeps them engaged. Topics must be relevant to learners, which implies that they can associate the content with important facts for them, facts that for

instance are related to their daily life. It will allow the learners to quickly link the content to previous knowledge. Learners remember more easily what is connected to their life.

- Recodifying in own words of helps retention What we have produced ourselves, we generally remember much better. If students can create their own explanation of a newly introduced concept, if – in other words – they can recodify new information, they will keep the information much easier in their long-term memory (Rosler, R. 2014).
- Evaluating through immediate feedback The error signal will allow the brain to adjust the hypotheses that it is emitting on the action that it carries out. It is the difference between the prediction of the brain and observation that will create surprise, and that will take place to learning process.
- Reinforcing, consolidating the information In order to consolidate the information in the long-term memory, information should be presented in as many ways as possible. If information can be stored via different memory's ways, learners will have access to it via the various ways.
- Using the multiplicity of senses Over the last decades, several modern language instruction techniques for students with language issues (as dyslexia) have coalesced into a method called Multisensory Structural Language Education, which stimulates all senses with articulatory modalities for teaching (Birsch 1999). And different researches (Silver et al., 2000; Haggart 2003) have shown that all students and teachers can gain great benefits from a multisensory approach in the teaching and learning process. Concerning foreign language learning at an adult age, it implies more than knowledges of efficient language learning strategies (Myréen, 2015). Learning new language implies also learning new culture codes, new cultural ways of thinking. Using Multisensory learning is knocking all sensory doors for such a significant learning to be happening. Let's test, hear, see, touch and smell new learning, new languages!
- Collaboration and conflict are good for learning! Of course, not all conflict is beneficial for learning, but according to Bourgeois and Nizet (1997) it is an interesting feature of interactive approaches of learning, that they only have a value added if they serve the confrontation of a variety of viewpoints, resulting in a "socio-cognitif conflict"⁵ and a consequent resolution through the elaboration of new points of view. However, collaboration has further benefits: it allows learner to put into practice the acquired knowledge as they engage in

² Fleming N. VARK: A Guide to Learning Styles (online) http://www.vark-learn.com/english/page.asp?p_questionnaire.

³ <https://www.tecweb.org/styles/gardner.html>

⁴ <https://visme.co/blog/8-learning-styles/>

⁵ Socio-cognitive conflict is a situation where people's different views and opinions about a subject become apparent and could result in common learning cooperation and development of new positions

interaction with the peers. It can also serve the empowerment of participants, as their contributions are valorized by their peers. Different tools and techniques are at the disposal of facilitators to put into practice the aspects listed above. It is not our ambition to present these in depth, but we encourage you to try them and taste them.⁶ Let's now turn our attention to exploring to what extent these different concerns are important for you and present in your practice.

⁶ You can find good resources on the Salto youth resource centres pages: <https://www.salto-youth.net/tools/toolbox/search/>