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# Neuroscience and memorable virtual learning experiences

***To be effective, online training must come to terms with instructional design that takes into account the functioning of the human brain.***

We have already discussed in previous articles, such as **Neuroscience and training: how to improve the learning of new skills** the close relationship between the functions of the human brain and its relation to distance learning.

Neuroscience applied to learning starts from scientific studies on the functioning of the human brain, but it is definitely a developing field of research. To date, there is no completely complete understanding of the human brain and its functioning in relation to online education.

## What is cognition?

Cognition is the mental process of acquiring, processing and storing knowledge and understanding through our senses, thoughts and experiences.
This process occurs at both the conscious and unconscious level: in fact, our brain is constantly engaged in this complex operation even when we are not aware of it.

One of the responsibilities of **online corporate training** is to create learning experiences that teach people what they need to know to do their best work in the company.

We usually talk about the importance of knowing one's training target and **Learner Personas**, but in more descriptive/anagraphical terms (age, experience, education, preferences, skill level, etc.).

In reality, each employee is primarily involved at a cognitive level in the learning experiences created by the training department and it is in the minds of people that the information conveyed by training competes with all the other information with which employees come into contact, in an increasingly fast-paced and input-rich world.

Consider that in addition to the information overload typical of our days, we all 'absorb' at all times different kinds of feelings and experiences that, most of the time, are quickly forgotten (some are not even processed). Therefore, even when we provide a learning experience, it cannot be excluded that the learner is experiencing and perceiving many other things, even in the midst of learning. Perhaps he/she is attending the training, seeing it, but not necessarily processing it.

## Distractions in the online learning path

Without considering the various external distractions (due to the environment outside the virtual one) that may divert the learner's attention from the course, it is necessary to consider the distractions within the course. The training itself may have distracting elements, e.g:
does the course provide too much information all at once?
does the course have graphically 'flashy' elements ( responsive screen issues, excessively loud audio, misaligned audio-video creating dissonance) that divert the attention of the trainee from the key concepts?
This means considering the online learning experience primarily from the perspective of possible **cognitive overload** of the trainee.

Furthermore, we tend to learn better if we learn in a specific location or position (sitting or standing).
In fact, virtual or digital 'places' are not processed by our brain in the same way as real physical spaces. Hence the difficulty one sometimes experiences in concentrating 100% during a Zoom call made from one's living room.

In remote training one usually only sees people's faces and misses many cues that would be visible live.
From a sociological and cognitive point of view, our brains are not as good at processing information without the social cues we are used to seeing.

## How to improve online training from a cognitive point of view

So, what might be ways to overcome some of the challenges of virtual learning by trying to maximise its memorability and effectiveness?

1. Encourage learners to always be in the same place and space when experiencing a virtual learning experience
2. Introduce more gamification, specifically group games in the online learning journey (games involve more senses than the passive enjoyment of a course on the screen)
3. Build learning experiences to teach people how to learn at a distance, especially for those who have never had online learning experiences before.

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