

MORE REASONS TO ENCOURAGE GAME-BASED LEARNING

It is clear that new technologies have invaded our daily lives. Today's students (and not only them) are enveloped in a maelstrom of social networks, digital screens, music players and smartphones. And their brains are probably changing and reorganising themselves differently from previous generations as a result of the hyper-stimulation they are exposed to, something that will have to be confirmed by future research. But while we await these studies, we cannot ignore the educational repercussions derived from the fact that the new generations have grown up in environments where technology is the leading player.

For learning itself, as Guillén states, game-based learning is becoming increasingly popular in our classrooms. And rightly so, since play is a natural, genetically rooted mechanism that awakens curiosity, is pleasurable and allows us to acquire skills that are essential throughout our lives to better cope in the world around us. Children's innate brain mechanisms allow them, at just a few months of age, to learn by playing. We like to play because doing so releases dopamine, which makes the **uncertainty** associated with play motivate us, constituting a real brain reward and providing the feedback that is so important for learning (Guillén, 2015).

Related to uncertainty and its effect on motivation and learning, it has been found that students are able to take greater risks when school tasks are presented as games (Howard-Jones, 2011).

Going a little deeper with **dopamine**, it is by far the most popular neurotransmitter among the general population; in fact, there are several songs and a pop music group named after it. Additionally, Google returns around 550,000 results, and PubMed 145,000, for the name of the neurotransmitter. Of the latter, the oldest is a 1948 article entitled "The pharmacology of compounds structurally related to hydroxytyramine" (Lands, et al, 1948).

The interest in this molecule is undoubtedly related to various brain functions in which it is involved, including one in particular that has implications for survival: the sensation of **pleasure** and **reward**.

Ultimately, game-based learning provides the following factors (Guillén, 2015):

- **Pleasure and satisfaction:** through the natural need for play, the pupil tries, explores and accepts mistakes as normal because they allow himself/herself to improve and this is a great satisfaction. They enjoy the process.
- **Stimulates curiosity:** play allows the learner to discover new opportunities and makes him/her more creative. Making progress requires them to continually ask themselves what decisions to make.
- **Stimulates the desire to improve, challenge and self-confidence:** the feedback generated through the game makes the student persevere and continue to face new challenges. And this improves self-esteem, social recognition from peers and is a great way to foster resilience.
- **It is an opportunity to express feelings:** when playing, emotions are expressed naturally. The pupil takes on a leading role and in the maelstrom of play shows himself as he is.
- **It favours the internalisation of guidelines and norms of social behaviour:** any game has its own rules that must be known and respected. Many pupils who are incapable of maintaining elementary rules show themselves to be totally respectful of them during the game
- **Stimulates the development of physical, psychological, affective and social functions:** depending on the type of game, we will exercise some bodily functions or others. Particularly interesting are group games that facilitate cooperative learning.

In conclusion, game is an essential tool for motivating pupils and their relationship with new technologies makes it necessary to adapt many pedagogical interventions with these guidelines in mind. We can no longer use the demands of the curriculum as an excuse to justify our lack of innovation. It is often not a lack of resources (which also exists) but a lack of interest in using creative strategies to enter the future.

Bibliography:

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