



Motivating through the brain reward system

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ABSTRACT

To motivate learners, from beginners to top performance levels, is one of the toughest tasks for teachers and coaches who find it very hard, particularly when working with the young generations. This is due to the distracting elements like electronic games, social media and internet. With the help of recent research, neurosciences have discovered how to activate the brain reward centre that moves people to action.

Key words: motivation, reward system, electronic games, dopamine

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BRAIN AWARD SYSTEM

I will start telling you how the brain reward system works, so that we can later apply it to our lessons or coaching sessions. The brain reward system is the one that promises you will feel happy, and drives you to act. This area called motor-limbic strengthening circuit includes very primitive regions in our brain and has evolved to drive us towards action and consumption. Our world is full of stimuli that make it work: ads, clothes and racket brands, electronic devices, etc. They drive us to action in search of a promised happiness. Our brain is obsessed with: "I want it", "I want the racket Federer uses", and once it is triggered, it is harder and harder to say "I don't want it". So, when the brain acknowledges the opportunity for a reward, it liberates the neurotransmitter dopamine. Dopamine tells the rest of the brain what to pay attention to, and in which direction to go. However, a squirt of dopamine does not bring about happiness, but a feeling of excitement and pleasure. We feel alert, awake, euphoric, spellbound, captivated. When we recognize the possibilities of feeling well, we do whatever is necessary to achieve that sensation. Over the last years, neuroscience has given different names to the dopamine liberation in the brain: search, want, desire, yearn. It was in 2001, after an experiment of Doctor Brian Knutson, from Stanford University, that the anticipatory effects of dopamine were definitely demonstrated, and not the experience of feeling rewarded.



Dr. Knutson placed different people under brain scanners and conditioned them to wait for the opportunity of getting money, if they saw a particular symbol on a screen. In order to get that money, they had to press a button when the symbol cropped

up. But the reward system activated and illuminated as soon as the symbol appeared, before getting the reward. When the participants got the money, this area deactivated. The pleasure of getting the money was reflected in the activation of other areas. This way, it was proved that dopamine relates to action and not happiness (Bachrach, 2014). The promise of the reward is a warranty for not missing the opportunity.



Whatever you think that will make you happy, will activate this area, the smell of coffee, a discount at the supermarket, getting a cap if you win the next point, if you enter the first service you are the first in the class, etc. Dopamine, then, captures all your attention, your mind is obsessed with getting that, or repeating the behaviour that was once triggered by the same stimulus. The dopamine wave shows that new object of desire as something vital for survival. This is a perfect mechanism of nature that assures that you will eat again, even if you do not feel like going to buy some food. That is why we are not extinguished. "Evolution is not interested in happiness, but uses the promise of happiness for you to continue fighting for survival", says Dr. Estanislao Bachrach. It is the promise of happiness, not happiness itself, the strategy of the brain for you to go on working, conquering and accumulating. When a racket brand makes advertising campaigns for you to feel the desire to get it, you are becoming a slave of the dopamine squirt, that will make you look for all the "opportunities" to get what you think will make you happy: "the new Roger's racket". Nowadays, modern technologies provide a sensation of instant gratification. You know that the newly received email or Youtube video may make you laugh, so, you keep on impulsively checking the device you have in front of you all the time. It is as if your smart-phone and laptop had a wire directly

connected to your brain, as if it were constantly feeding it with dopamine flows. That is why technology is so addictive, and you want more and more. The basic internet function perfectly describes the basic function of the reward system: to look for, to go for more. Although internet, the social media and cellular phones have accidentally burst your reward system, computers and games are designed to keep you trapped, playing and playing: the promise to reach the next level. That is why you find it difficult to quit the Playstation, the Wii or the like (McGonigal, 2012).

ADDICTION TO ELECTRONIC GAMES

A study has shown that playing a video game increases the quantity of dopamine just as much as the use of amphetamines. The unpredictability of the score, or advancing to the next level will keep you glued to the joystick or to the screen of your phone. This can be either tremendously entertaining or dangerously addictive.

Studies show that when the promise of a reward is released, we become more susceptible to all kinds of temptations, many of which trigger our bad habits, for example soft drinks consumption. High levels of dopamine widen the attraction of immediate gratification and you are less concerned about long term consequences. This system also responds to the novelty and variety, that is to say, your dopaminergic neurons - the ones that segregate dopamine - respond to familiar stimuli less and less, the same thing happens with things you are very fond of doing, like eating a particular dish, or a certain drill on court. That is why it is very important to programme different exercises and with the possibility of advancing levels. For this reason, racket brands change the cosmetic appearance, models, colours, etc. all the time.

HOW TO PLAN EXERCISES TO ACTIVATE THE BRAIN REWARD SYSTEM

Knowing how the brain reward system works, helps us to motivate children and players to train and compete. It is necessary to prepare exercises, with different levels, that players must overcome, just like advancing levels in video games. For example, in the tennis schools, level one is hitting the ball, level two, making it overcome the net, level three, directing the ball towards a certain target, level four, hitting the target. Remember that the promise to advance to the next level activates the brain reward system, and drives the child towards action.

Examples of exercises for the different competency levels: First cross-court forehand, for level 1, each player places 5 balls in a given area, without failing, level 2, seven balls without failing, level 3, nine balls without failing, and so on and so forth. If we use our creativity, the number of possible exercises and levels

is unlimited. Remember that the young generations come to coaching and class with their brains shaped by electronic games.

CONCLUSION

The reward system is activated with the promise of getting something you wish, or meeting an objective. I have proved that trying to set a programme with different levels, just as in electronic games, increases the learners' will, their level of commitment and the permanence of the players of all levels all year long.

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