Section 2
Chapter 9 - Gamification and Self-Direct Learning: The Use of Mobile Applications in Education and Lifelong Learning

Exemplary case 4

Title: *Decoder*

Description:

It's called a Decoder, and it was developed by a team of Cambridge experts. Used regularly, it appears to enhance the ability to concentrate and pay attention, with results comparable to stimulants such as nicotine and Ritalin.

The operation of the Decoder is simple: the game asks the user to observe a series of numbers flowing on the screen, and to press a key when identifying certain specific number sequences. Simple, then, but effective. This kind of training should in fact activate the so-called fronto-parietal network of the brain, a structure that, if trained, improves our ability to concentrate. To prove it, the Cambridge researchers organized a trial, in which a group of volunteers used the App for eight hours in a month. At the end of the training the participants underwent a test designed to assess their ability to concentrate, and the results were compared with those of a group of volunteers who used a different game, and with a group of people who did not use any brain training App.

Results in hand, the researchers assure us that Decoder was able to increase the attention and concentration skills of the participants significantly, ensuring performance far superior to that of the other two groups of volunteers examined. Its effects - they write in the study - would be comparable to those of stimulants such as nicotine or methylphenidate hydrochloride, a drug better known under the trade name of Ritalin and used in the treatment of attention deficit hyperactivity disorder (or ADHD).

The University entrusted the development and marketing of the game to Peak, a company specializing in "evidence based brain training apps ".[1]

---

[1] https://doi.org/10.3389/fnbeh.2019.00002