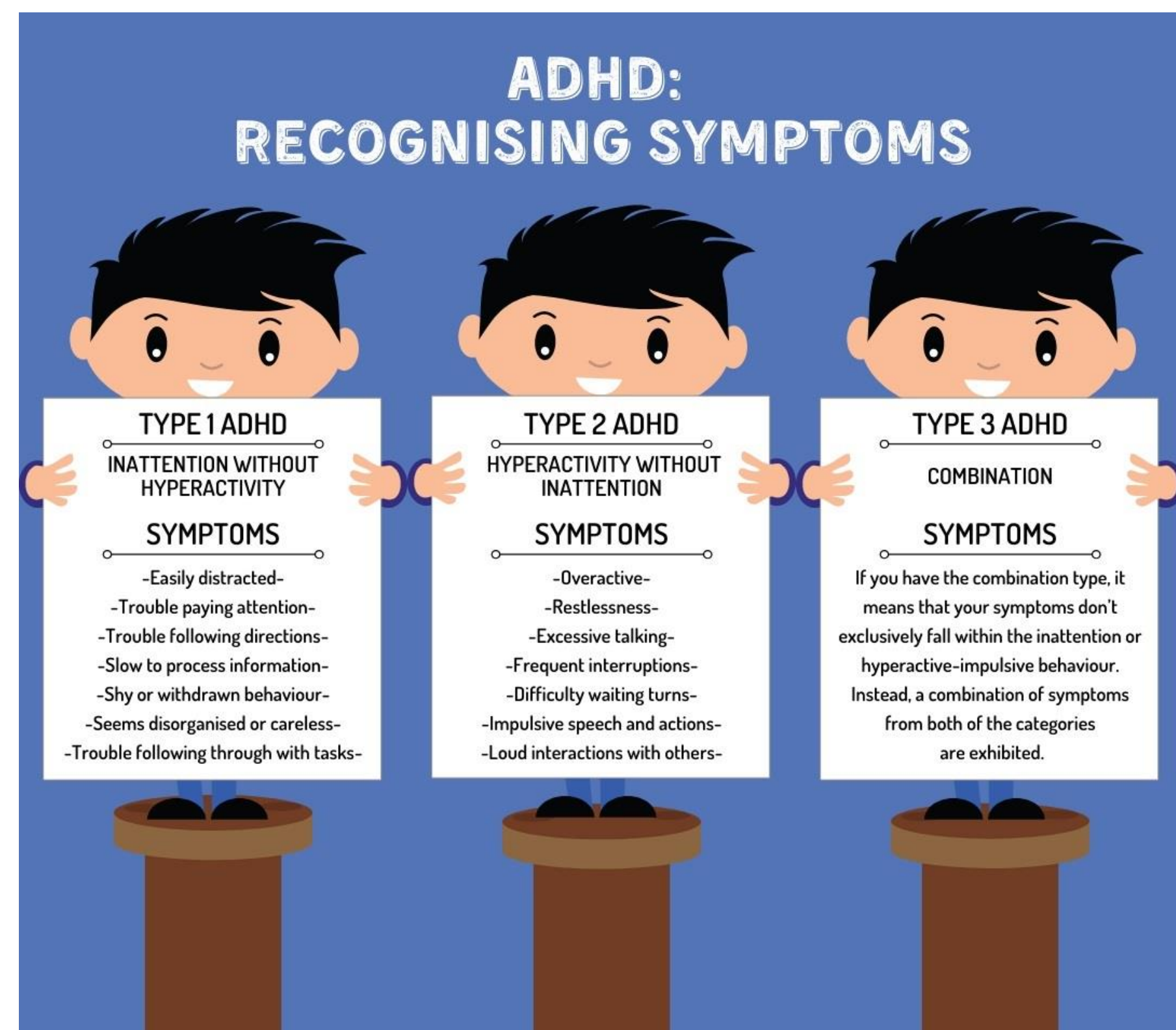


Creating A Supportive ADHD Environment With VR

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Introduction

According to the CDC, an estimated 6 million children are diagnosed with ADHD. This disorder can affect a person's functionality socially, personally, occupationally, and physically (Koutsoklenis, & Honkasilta, 2023). Many people struggle with overstimulation, focusing, memory, organization, and time management and may need accommodations. VR has been used successfully in other areas such as academics, communication, and career \training, like medical and military.



ADHD types illustration. Retrieved from <https://camhsprofessionals.co.uk/2021/04/01/adhd-recognising-symptoms%F0%9F%8C%8D/>

ADHD is a combination of elevated epinephrine and decreased dopamine. The prime treatment for ADHD is drugs.

Objectives

To explore the potential of VR for people with ADHD to improve their learning and life skills.

- How is VR beneficial to ADHD learners?
- How can ADHD learners convert VR skills into everyday use?

Methods

Using OneSearch, PubMed, and Google Scholar, I used various search terms to focus on the struggles a person with ADHD may face. I also used PubMed to find more credible research. Some terms used were; ADHD and VR, ADHD learning, ADHD and gamification, and game-based learning. My objective was to find information supporting the benefits of VR to assist those with ADHD and improve their learning skills.

Results

- ✓ VR is a viable tool to help those with ADHD by improving cognitive behaviors.
- ✓ VR offers a safe environment to learn and experiment.
- ✓ VR headsets are becoming more affordable.
- ✓ Existing VR tech like Floreo VR and EndeavorRx has shown promise with developing social and life skills for neurodivergence.
- ✓ EndeavorRx is a game-based digital therapeutic device for 8 – 12 year olds.
- ✓ Floreo VR is an immersive experience to assist ADHD learners with social, behavioral, cognitive, and life skills.
- ✓ EEG signals were used to track cognitive ability improvement successfully.



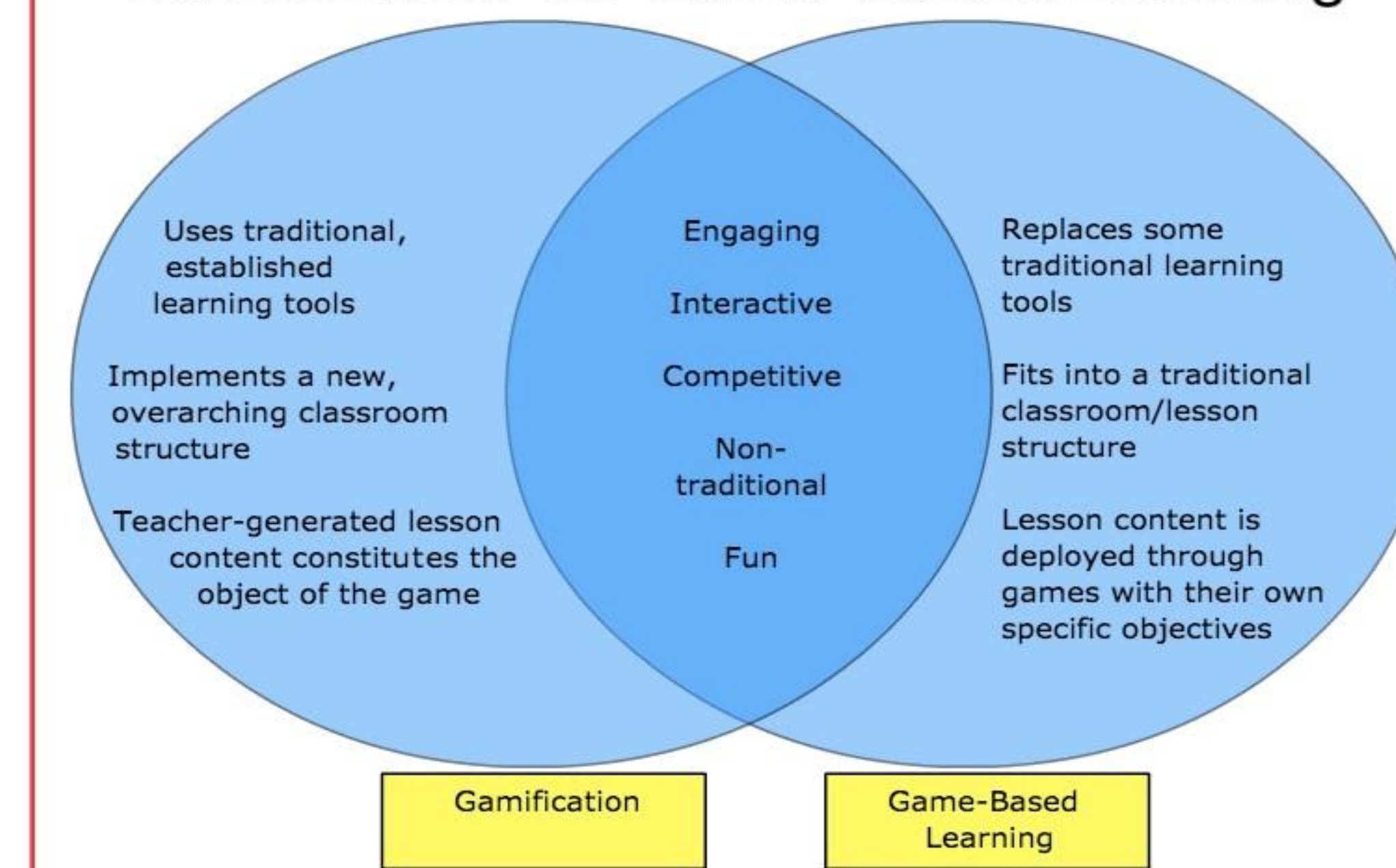
Woman with EEG/VR headset. Retrieved from <https://www.istockphoto.com/en/photo/neuroscience-lab-patient-with-virtual-reality-goggles-and-eeeg-brainwave-cap-gm1218970123-356393734?phrase=eeeg>

Results



- ✓ VR Avatar usage has been shown to reduce anxiety.
- ✓ Outside of a headset, two concepts that can assist ADHD learners are game-based learning and gamification.
- ✓ According to James Paul Gee, problem-solving is at the root of every good game (Gee, 2003).
- ✓ In games, a player is co-creating a world via actions and decisions. This is a skill set that translates into the real world (Gee, 2018).

Gamification vs. Game-Based Learning



Gamification vs. GBL. Retrieved from <https://www.legendsoflearning.com/blog/gbl-vs-gamification/>

Conclusions

There is substantial evidence that VR is a viable tool to help those with ADHD by improving cognitive behavior:

- Research supports VR to use as a treatment alternative to drugs and traditional therapy
- Implementing gamification within VR improves working memory, social skills, and attention span
- More research and funding are needed to make VR accessible.

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