

ZEN ZONE: Practice Lifeskills in VR Game for Individuals with ADHD

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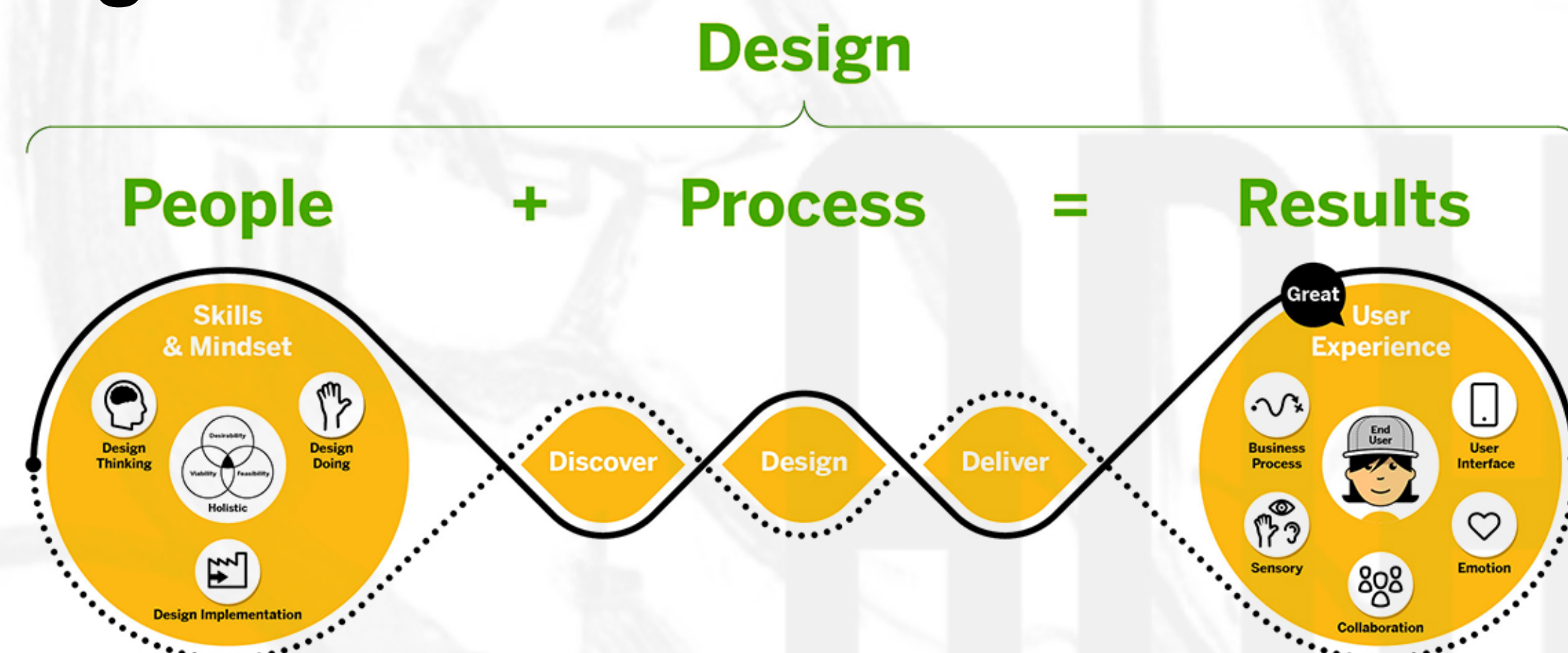
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Introduction

The neurodevelopmental disorder of Attention Deficit Hyperactivity Disorder (ADHD) is characterized by issues with hyperactivity, impulsivity, and attention. It affects people of all ages and may greatly impact how well they perform in school, social life, and work.

Virtual Reality (VR) games are a new method of helping people with ADHD and have the potential to offer people with ADHD a safe, regulated, and enjoyable environment to practice cognitive abilities, control behavior, and enhance attention. This project details creating and assessing a VR game, especially for people with ADHD.

Design Process



1. Determine the issues that people with ADHD experience.
2. Come up with solutions for how VR games can help with these issues.
3. Create prototypes of these concepts for VR games.
4. Conduct usability testing and user feedback sessions.
5. Evaluate the effectiveness of VR games in addressing the problems faced by individuals with ADHD.
6. Iteration on the design and creation of VR games.

Method

Interview was conducted with Nick Lang, the director of Changing Day, a VR game for autistic individuals.

Changing Day conducted paper research, created a questionnaire for autistic individuals, and tested prototypes extensively with people of all ages. In designing for autistic individuals they opted to not include human faces in their game.

Interview Analysis

Characteristics of the game for individuals with ADHD:

- **Attention-grabbing:** The game should have features that immediately capture and maintain the user's attention without overstimulating.
- **Simplicity:** The game should be easy to understand and play with a straightforward interface that is not too cluttered.
- **Structure and predictability:** The game should have a clear structure, consistent rules, and a predictable environment that helps individuals with ADHD feel more in control and less overwhelmed.
- **Short and varied tasks:** The game should have a variety of short and manageable tasks that provide a sense of accomplishment without being too difficult or prolonged.

Why ZENZONE?

The game allows the player to customize the dimensions of the room, the color of the walls, and the type of presentation, and even upload their presentation in advance.

The audience is represented by AI, and they can ask questions during the presentation.

The potential benefits of this game for individuals with ADHD who struggle with public speaking include the opportunity to practice in a safe and controlled environment, the ability to adjust the environment to their preferences, and the use of AI to simulate a real audience.

The game's effectiveness may vary depending on the individual's level of engagement, and there is a need to assess its long-term impact on real-life public speaking situations.

The game could be improved by incorporating more interactive features, such as the ability for the audience to provide feedback or the option to adjust the level of difficulty based on the individual's skill level.

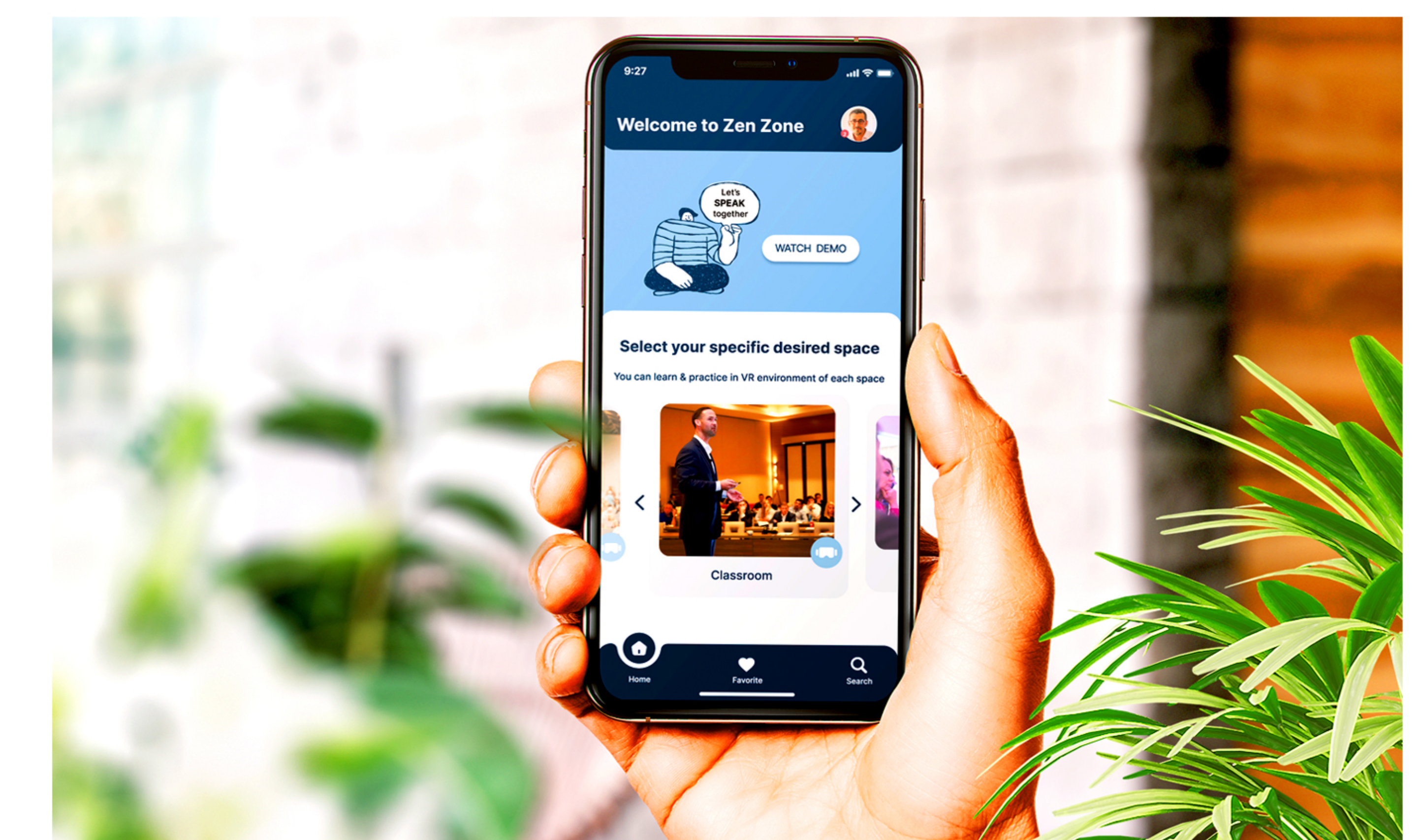
Data Analysis: Card Sorting

Game design elements	Use attention-grabbing elements	Provide scaffolding	Avoid complex instructions	Game length	Difficulty level	Stay motivated	Time pressure	Predictable patterns	Avoid repetitive tasks	Feedback and rewards	Customization options
Visual design	Visual clutter	Bright or neon colors	Use visual feedback	Use gestures or symbols	Incorporate multiple viewpoints	Visual cues	Reducing distractions	memorable game			
Game environment	Fast-paced movement	Varied challenges	regulate their emotions	fun and engaging	User control	Play-based learning	Non-verbal communication	Not overstimulating Environment	Humor		
Game mechanics	praise and rewards	encourage to continue playing	Short-term goals	Open-ended tasks	Narrative structure	consistent consequences	Predictable consequences	prioritize tasks	Personalization	Adaptive difficulty	
Self-awareness	self-esteem	use their problem-solving skills	Positive self-talk	Replayability	Positive role models	honesty and respect	positive relationships with others	Incorporate teamwork			
Therapeutic techniques	use their creativity	Time management	Multitasking	Incorporate social interaction	Positive reinforcement	attention training exercises	improve their focus	Empathy	Mindfulness	Multimodal learning	collaboration into the game

Mobile App Design - Medium-Fidelity Prototype



Mobile App Design - High-Fidelity Prototype



References:

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