

Designing Children's Health Technology

A fitness technology company is developing a new smartwatch designed specifically for children ages 7 and up. The proposed device aims to encourage physical activity through gamification and digital companionship. The core feature is a customizable virtual character whose emotional state is directly tied to whether the child meets their daily exercise goals. When activity goals are met, the virtual friend appears happy and the child unlocks new customization options. When goals are missed, the companion appears visibly sad and withdrawn.

The device also includes mini-games that children can play, but these are strategically locked and unlocked based on physical activity levels. Children must complete movement goals to continue playing their games. While early testing shows the features are effective at increasing physical activity, child psychology experts have raised questions about the impact of using digital rewards and emotional feedback to influence children's behavior patterns during crucial developmental years.

Additionally, the watch would include basic communication features allowing children to contact parent-approved contacts, and location tracking capabilities for safety monitoring.

The development team must now evaluate whether these behavioral design elements are appropriate for young users, and if so, how to implement them responsibly.

1. Identify Direct and Indirect Stakeholders.
2. What are the benefits and drawbacks for individual stakeholders?
3. What are the social, cultural, economic and environmental contexts where the design will be used?
4. What are key values at stake and value conflicts?
5. As a designer what additional information would be needed to evaluate whether these behavioral design elements are appropriate for young users and how to implement them responsibly

Case Study from: Santa Clara University, “Kids, Exercise, and Technology,” @SantaClaraUniv, (2022).

<https://www.scu.edu/ethics/focus-areas/internet-ethics/resources/kids-exercise-and-technology-a-n-ethics-case-study/>

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