The Interface Design of Assisting Children to Find Books in the Library Using Smartwatches

Wei-Ching Wang, Chun-Ching Chen, Tzu-Heng Chu
Department of Interaction Design at National Taipei University of Technology
Collaborated with the National Library of Public Information

Background

Ever-evolving technologies allow modern libraries to introduce multiple digital devices to enable readers to more easily find their desired books. However, the cognitive abilities of children might bring about incorrect use of these devices. Therefore, it is imperative that libraries pursue innovative services such as visualized interfaces specifically designed for children in order to accommodate their needs.

Problems & Solutions

- Book locations: Navigation map
- Book call numbers: Simple bookshelf codes
- Book-finding devices: Easy-carrying smartwatches

Research & Design Process

Pilot Studies

Existing Product Analysis → Experts Interviews → Design Guidelines → Book-finding Flow → UI Flow

Book-Finding Service Process

1. Borrow a smartwatch.
2. Watch instructions on how to use the interface.
4. Walk along the route.
5. Locate the fruits and codes to find the book.
6. Found it!

Book-Finding Smartwatch Interface Design

Results

268 children at age 7-11 used smartwatches to find books, and all of them found a book in six minutes! After System Usability Scale (SUS) testing, the application is at 88.4% on the SUS scale that presented "good" usability. This development is of great value to children’s libraries and serves as reference for smaller interface designs.