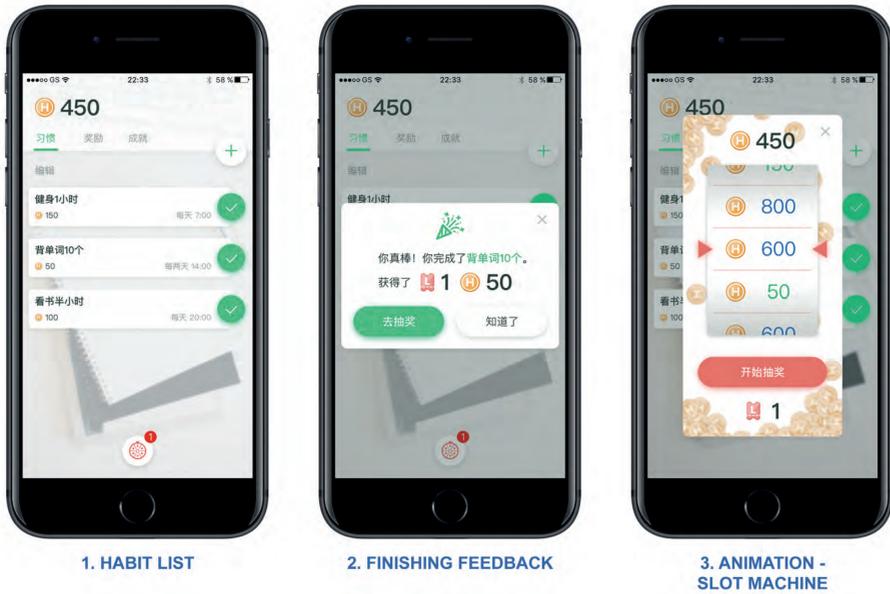


# Gamification of Habit Formation: A Virtual-Currency Reward System



1. HABIT LIST

2. FINISHING FEEDBACK

3. ANIMATION - SLOT MACHINE

Current User Interfaces of Habit Buying

## Special Focus

The whole thesis is related to the theories of gamification and habit formation. "Gamification" is the process of using game design elements in non-game contexts to engage or motivate users to achieve their goals. And habit formation is the process by which a behavior, through regular repetition, becomes automatic or habitual, which can be analyzed in 3 parts: cue, routine and reward.

Focusing on the reward part, this thesis has investigated and explored the possibility of using a virtual-currency reward system as gamification of habit formation, and the usability of the application designed on the basis of the system with the aim of finding a suitable gamification form.

According to the Lean UX process, personas and context of use were built to propose hypotheses, which were the basis of the iterative user tests. To improve the user experience, the author tried to solve the problems in an emotional way. Also, a usability test was run to verify the design of the application.

## Abstract

Habits have a vast and indispensable influence on our lives. However, to form a good habit is hard. The goal of this thesis has been to find out a suitable gamification form for habit formation to make people live their lives more effectively and encouragingly.

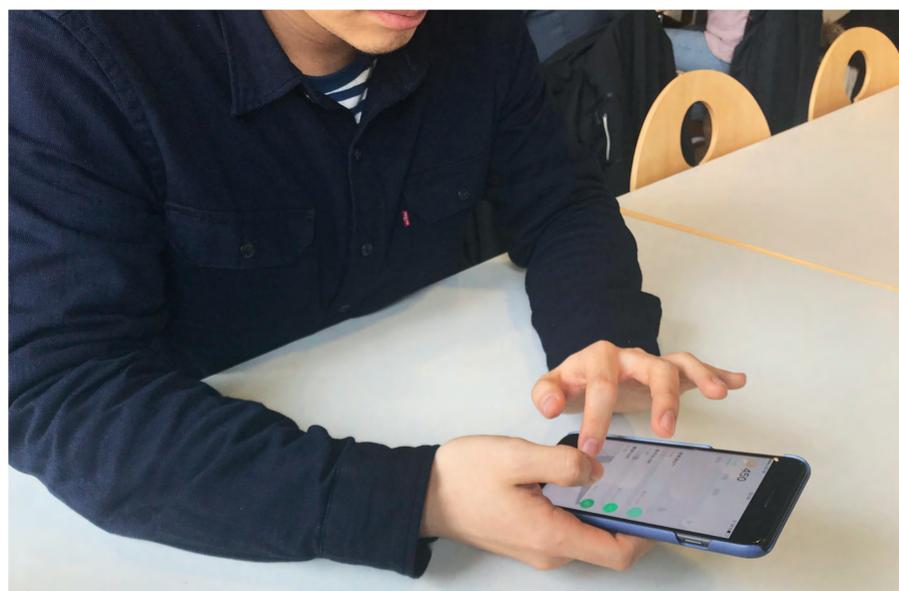
The author, therefore, proposes a virtual-currency reward system in a gamification way that connects habits, rewards, and punishments based on the theories of the Habit Loop and the Hook Model.

The methodology used in this thesis is known as the Lean UX. A number of user tests were performed in iterations to not only verify the effectiveness of the system but also improve the user experience emotionally.

Additionally, a usability test was performed to verify the design of the application using the system.

<p><b>Qin TAN</b> THE GAMER male, 26, in a relationship</p> <ul style="list-style-type: none"> <li>- Chinese, live in NYC, USA</li> <li>- Product Manager, Master in Industrial Design at Parsons School of Design</li> <li>- Phone: APPLE iPhone 7 Plus</li> <li>- Hobby: Play games, Play football, Photography</li> <li>- Like: Simplicity, Sense of Control, Make friends, Interesting Things</li> <li>- Dislike: Overtime, Be interrupted, Chaos, Depressed Feeling</li> </ul> <p><b>How to form a new habit</b></p> <ul style="list-style-type: none"> <li>- Set reward when succeed over a couple days</li> <li>- Set punishments when failed</li> </ul>	<p><b>Bedroom</b></p> <p><b>Hardware / Interface</b></p> <p>iPhone 7 Plus with a touchscreen, PC or Console</p> <p><b>Spatial Situation</b></p> <p>Soft light, quiet, Wi-Fi available</p> <p><b>Personal Situation</b></p> <p>Sit, relax, wear headphones, concentrate on the gaming screen, few deflection</p> <p><b>Time Situation</b></p> <p>Use one time before going to bed about 1 Minute</p>

One of the Personas and Context of Use



Usability Test to Verify the Design

## Result and Future Work

The results indicate that a virtual-currency reward system connecting habits, rewards and punishments is useful and helpful for habit formation, but its encouraging effect will fade as time goes by. To help users resist the external temptation, the external temptation can be set as the reward in the system. Besides, by applying the theories of the Hook Model and the Habit Loop emotionally, the system is designed to "hook" users with the animated slot machine as variable reward. An achievement system is developed to keep the encouraging effect of the system continuously.

These results suggest that considerably more work will need to be done to modify and improve the current design. For the completeness of the application, more user tests for the remaining hypotheses should be run, and further study of adding new habits and rewards should be done.

Out of the theory of habit formation, future research should concentrate on the investigation of the reward of tribe. It would be interesting as well to compare user experiences and habits between Chinese users and users from western countries.



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