Applying gamification to improve quality of life

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Applying gamification to improve Quality of life

Exploration of the effectiveness of a game that empowers users to improve their quality of life

Problem investigation

Quality of life is the degree of excellence of everyday life

People

Planet

Prosperity

Tools

Serious games are games in which education is the primary goal, rather than entertainment

Gamification is the application of game design elements and principles in non-game contexts

The municipality of Eindhoven commissioned this research to evaluate the effectiveness of games as a tool to empower people to improve their quality of life

Solution design

Goal: design a game that empowers users to improve perceived health and decrease their ecological footprint.

Perceived health (people) and ecological footprint (planet) are chosen as antecedents of quality of life.

Methodology

Case study design, including quantitative analysis of current and future state.

Results

To enhance the game it is advised to simplify the game, approximately 87% of non-value added time that has previously been required to play the game can in the future be made obsolete, e.g. by implementing an automated activity tracker.

Furthermore, it is advised to allow users to review (and "down-vote") the activities that others have claimed, in order to increase perceived fairness.

Solution implementation

Target audience

Anybody who lives or works in the city of Eindhoven

The marketing campaign has been aimed particularly at government officials of the municipality of Eindhoven and students of Eindhoven university of Technology.

Sample (n = 16)

Quasi-experimental research design, including pre- and post-tests for both the experimental group (n = 9) and control group (n = 7).

Pilot planning

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<tbody>
<tr>
<td>Recruit -ment</td>
<td>Pre-test</td>
<td>Challenge 1 Move Consciously</td>
<td>Challenge 2: Green &amp; Smart, Blue &amp; Healthy</td>
<td>Post-test</td>
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To motivate users to physically move and travel "green", 2 challenges have been designed that challenge users to walk, cycle, run, work-out and commute by bike, instead of by car.

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Solution validation

Methodology

Quantitative analysis using multiple linear regression.

Results

Compared to the control group, the mobility ecological footprint of experimental subjects increased, instead of decreased. (p < 0.05)

Compared to the control group, bodily functions and social participation of experimental subjects improved. (p < 0.05)

Distribution of user activity per type

- 80% walking / cycling
- 8% working-out (physical)
- 10% social activity
- 2% "green" commuting