

Chapter 65

The Travelling Rose: A Persuasive Game to Stimulate Walking Behaviour of Older Persons in Low SES Neighbourhoods

Valentijn Visch

*Delft University of Technology, The
Netherlands*

Ingrid Mulder

*Delft University of Technology, The
Netherlands*

Wessel Bos

*Delft University of Technology, The
Netherlands*

Richard Prins

Erasmus Medical Center, The Netherlands

ABSTRACT

The persuasive game, Travelling Rose, aims to enhance walking activities of elderly residents living in neighbourhoods characterized by a low socioeconomic status. The game consists of a wooden pass-on box containing user-reports and instructions on how to find a companion, how to generate a surprise together, how to give this surprise a fellow neighbourhood member, and how to pass on the Travelling Rose box. The persuasive catch of the Travelling Rose is present when the companions are generating the surprise and are instructed to take a walk in the neighbourhood for easing social communication and flourishing creative ideas. In this chapter, the design process leading to the final version of the Travelling Rose is described, involving user studies, concept testing, and iterative prototyping. Secondly, the final prototype is presented and framed using the theoretical Persuasive Game Design model.

THE TRAVELLING ROSE PROJECT

Introduction to its Authors

The Travelling Rose project is initiated as a collaboration between the faculty of Industrial Design Engineering of the Delft University of Technology and the Department of Public Health

of the Erasmus Medical Center in Rotterdam. The Travelling Rose is embedded in the larger research project 'NEW.ROADS', coordinated by the fourth author Richard (Rick) Prins. This encompassing project aims to enhance walking behaviour of elderly by social and physical interventions in four neighbourhoods of Rotterdam, which are characterized by a low socioeconomic

DOI: 10.4018/978-1-4666-8200-9.ch065

status (SES). The Erasmus Medical Center already developed some interventions, but Rick was also interested in seeking collaboration with designers, which is the reason he contacted the faculty of Industrial Design Engineering. In this faculty we not only focus on product engineering but also on designing products and services for specific user experiences, emotions, or behavioural change. For instance, the second author, Ingrid Mulder, is working in the field of design for social interactions and societal impact, and the first author Valentijn Visch is working in the area of persuasive game design. To design a creative intervention for the NEW.ROADS project, we searched for a good graduate student who was found in the person of the third author, Wessel Bos. Despite the interest and energy of the authors on developing the Travelling Rose, the project would never have been succeeded without the interest, support and collaboration of its end users, i.e., the residents of the Rotterdam Afrikaanderwijk.

SETTING THE STAGE

The Importance of Physical Activity

Being physically active is considered by the World Health Organisation to be a main factor for healthy aging. Physical activity is positively associated with the experienced quality of life in terms of self-efficacy, physical-, mental-, and social health. This effect is even enhanced when performed in companionship (e.g. sport clubs, friends). In terms of its societal impact, being physically inactive has been estimated to cause a burden of disease, which is as high as the burden of disease caused by smoking (Lee, Shiroma, Lobelo, Puska, Blair & Katzmarzyk, 2012). Although the benefits of physical activity are clear for individuals, healthcare professionals, and society, not everyone is physically active. Social healthcare research among densely populated neighbourhoods showed that especially elderly

(55+) living in low SES neighbourhoods are not physically active enough. The aim of the NEW.ROADS project is to motivate these groups to be more physically active by increasing their walking behaviour for at least 30 minutes a week.

Problem with Low SES and Physical Activity

Public health literature clearly describes the socio-economic disparities with regard to health. One of the factors contributing to these disparities are the differences in physical activity levels among the various SES groups. Studies show that people having a lower SES typically possess a less physically active lifestyle (Droomers, et al., 2001; Giles-Corti & Donovan, 2002) than people having a higher SES. It is hard to reach and motivate low SES groups to increase their physical activity. Despite various attempts, at least in the Netherlands, there are no lifestyle interventions which have proven to be effective for these groups (Busch & Schrijvers, 2010). Hence, there is a clear need for a new approach to target people living in lower SES neighbourhoods to promote their physical activity levels.

Persuasive Game Design Model

One of the new approaches to motivate users for behavioural change is by means of persuasive game design. In our Persuasive Game Design model (Visch, Vegt, Anderiesen, vanderKooij, 2013) we aim for behavioural change by adjusting the user's real world experience into game world experience. Users do not always need intentionally designed game products by external game designers to experience a game. For instance, children can perfectly play a hide and seek game in natural surroundings such as forest. In contrast, some intentionally designed game products such as chess may not always lead to game experiences as enjoyment or engagement but may as well lead to boredom or distraction. Therefore, we propose

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/the-travelling-rose/126117

Related Content

Games in Higher Education: Opportunities, Expectations, Challenges, and Results in Medical Education

Cláudia Ribeiro, Micaela Monteiro, Sofia Corredoura, Fernanda Candeias and João Pereira (2013). *New Pedagogical Approaches in Game Enhanced Learning: Curriculum Integration* (pp. 228-247).

www.irma-international.org/chapter/games-higher-education/75802

Football Manager as a Persuasive Game for Social Identity Formation

Linda K. Kaye (2015). *Gamification: Concepts, Methodologies, Tools, and Applications* (pp. 1421-1432).

www.irma-international.org/chapter/football-manager-as-a-persuasive-game-for-social-identity-formation/126124

Design and Development of a Low-Cost Exergaming System for Visually Impaired Students (LES-VIS) to Improve Mathematical Learning Skills and Physical Activity

Sharad Shetty, Mrunmayi Kadam, Arunachalam Muthiah, Arunita Paul, Aditya L. V. N. and Thirunavukkasrasu K. (2023). *Exergaming Intervention for Children, Adolescents, and Elderly People* (pp. 108-116).

www.irma-international.org/chapter/design-and-development-of-a-low-cost-exergaming-system-for-visually-impaired-students-les-vis-to-improve-mathematical-learning-skills-and-physical-activity/323075

Accessible Mobile Rehabilitation Games for Special User Groups

Sari Merilampi, Antti Koivisto and Andrew Sirkka (2019). *Design, Motivation, and Frameworks in Game-Based Learning* (pp. 214-238).

www.irma-international.org/chapter/accessible-mobile-rehabilitation-games-for-special-user-groups/208028

Blockchain-Enabled Automatic Learning Method for Digital Gaming Systems Based on Big Data

Lianghuan Zhong, Chao Qian and Yuhao Gao (2022). *International Journal of Gaming and Computer-Mediated Simulations* (pp. 1-22).

www.irma-international.org/article/blockchain-enabled-automatic-learning-method-for-digital-gaming-systems-based-on-big-data/315634