Chapter 20

Integration of Communication in a Game to Reflect and Discuss Dietary Habits among School Aged Children

Mikio Kamada
ACORDO Corporation, Japan

Masaki Moriyama
Fukuoka University, Japan

ABSTRACT

A new game that allows the players to reflect and discuss dietary habits, specifically targeting school-aged children, was developed. The game places greater emphasis on reflection and communication than competition and goal pursuit. An assessment experiment in an elementary school was performed and its findings demonstrate the effectiveness of the game. The most remarkable advantage of the game is that the goal of the game itself is a rich message, created by reflecting the players’ dietary habits. It is a new type of game in which play and communication is integrated to attain further balanced understanding of one’s and others’ dietary lives. The game has high potential for improvement and expansion, as its rules, theme, and card set can be adapted to suit various educational purposes. Moreover, its computerization will not only assist in its widespread distribution, but will also enable adding new useful features.

INTRODUCTION

Gamification has become a common tool in the healthcare field, with a wide variety of applications. In a recent review (Parisod et al., 2014), a number of target areas for such games were identified, including physical activity promotion; diet improvement; smoking and skin cancer prevention; obesity, asthma, and diabetes education; and awareness of physical disabilities and mental health issues. An important factor in the recent gamification efforts is the utilization of social media. According to Mittman (2012), “By harnessing the power of friendly competition, social games—played in mobile spaces, online networks and even workplaces and communities—are turning...
health problems into collective efforts to improve health. By harnessing social dynamics and social support, collaborative health games are keeping people motivated to stick with health goals and make healthier decisions.” For example, using iPod, Nike currently measures and records the distance, time, and route of a walk or run using GPS. This not only benefits individual users, allowing them to set personal goals and measure their performance, but also promotes communication, as friends can compete and compare scores.

While communication is an essential factor in these games, competition remains the key factor in player motivation. As explained by Vorderer et al. (2003), competition is a vital element in the quality of entertainment experience of video games. However, competitive consciousness occasionally restricts a player’s mental activities too closely to the goal and leads one to look at others through an overly narrow lens (Kohn, 1978, 1990).

We have focused on developing reflection- and communication-based, face-to-face learning programs for learning about health (Moriyama et al., 1992). In this work, taking a theme of learning dietary habits as an example, participants pick up several foods they frequently eat and then draw them on cards. Next, the participants arrange cards horizontally according to the frequency of consumption. We refer to this arrangement as a map, which is the epitome of the individual. As the participants view each other’s maps, they are encouraged to discuss the commonalities and dissimilarities among their eating habits. It is envisaged that preparing the maps motivates the participants to think about their diet and discuss it effectively. Our programs follow the goals of the Ottawa Charter for Health Promotion (1986), which states that “health is created by caring for oneself and others, by being able to take decisions and have control over one’s life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members.”

Although competition was not included in these programs, the participants were very enthusiastic to complete the requested tasks. This reflected their interest in the program themes and the desire to communicate with other participants. We believe that, although it operates in a different manner, communication has the power to actively engage players in games to the same degree as competition. As Howarth (1912) noted, competition is essentially selfish, despite its regulation by forbidding the practice of objectionable methods. This point is very important in the use of competition for gamification. While competition actively engages players, it prevents them from learning through interaction, as it causes the other players to be regarded as opponents. Conversely, when communication is the main objective of the game, players are more likely to learn from others. Despite these known benefits of human communication, it is presently limited in gamification. Thus, by integrating communication in a variety of ways, gamification can benefit from a much greater number of potential applications. Blending two elements, competition and communication, in a harmonic way will be very important in future gamification, in accordance with the intended use.

Our program was gamified as a food card game. Owing to gamification, the program evolved into being more enjoyable and convenient for the users. The prepared cards and the game rules assist the users in understanding and manipulating the program; thus, the gamification will also help promote its widespread usage. In the following sections, the gamification design, the effects of gamification, the model analysis of the game developed, and the future potential of the game will be discussed.

BACKGROUND

According to the existing records, the first card game was played during the period of the Tang Dynasty in China from 618 to 907 (Wilkinson,
Related Content

A Design Framework for Educational Exergames
[www.igi-global.com/chapter/design-framework-educational-exergames/75798?camid=4v1a](www.igi-global.com/chapter/design-framework-educational-exergames/75798?camid=4v1a)

Lessons Learned about Designing Augmented Realities
[www.igi-global.com/article/lessons-learned-designing-augmented-realities/2158?camid=4v1a](www.igi-global.com/article/lessons-learned-designing-augmented-realities/2158?camid=4v1a)

Does Game Quality Reflect Heuristic Evaluation?: Heuristic Evaluation of Games in Different Quality Strata
[www.igi-global.com/article/does-game-quality-reflect-heuristic-evaluation/123500?camid=4v1a](www.igi-global.com/article/does-game-quality-reflect-heuristic-evaluation/123500?camid=4v1a)

Serious Games in Speech Therapy
Tobolcea Iolanda and Danubianu Mirela (2012). *Handbook of Research on Serious Games as Educational, Business and Research Tools* (pp. 422-445).
[www.igi-global.com/chapter/serious-games-speech-therapy/64267?camid=4v1a](www.igi-global.com/chapter/serious-games-speech-therapy/64267?camid=4v1a)