
USERS' HEALTH PROMOTION THROUGH SPORT RELATED GAMIFIED APPLICATIONS

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Synopsis:

Abstract:

Background of the research and theoretical framework

It has been proved that a sedentary lifestyle is a risk factor for the development of many chronic diseases (cardiovascular illnesses, obesity, osteoporosis, diabetes, etc.) (EU Physical Activity Guidelines, 2008). Therefore global governing bodies (World Health Organization, European Union, etc.) are striving to design "proactive" health systems oriented to prevention rather than to cure. Moreover, considering that in the next decade health care spending will grow substantially in many countries (International Monetary Fund, 2011), costs reduction through the promotion of healthy and active behaviours is a primary concern.

Technology and ICTs play a key role in finding new ways to reduce costs and increase the efficiency and quality of care .

In this study we focus on the use of interactive technologies for stimulating a positive change in terms of people behaviour, mainly as regard to active lifestyles. The analytical framework refers to serious game-based approaches (Sylvester, 2012) and gamification (Zichermann, Linder, 2013). Such relatively new concepts describe the development of games and video games elements, specifically designed to change users' behaviour in terms of knowledge, attitude, commitment (McCallum, 2012). By adding a "gamification" dimension in non-gaming contexts (education, organizational environment, loyalty programs, etc.), digital and interactive applications have proved to drive users engagement and to change their behaviour.

Aim of the paper, research design and methodology

Through a first qualitative investigation about digital and online platforms, we found that one of the more common fields in gamification relates to sports and physical activity.

Sport related interfaces include for instance “wearable technologies” like smart watches and wrist bands (e.g. Jawbone, Fitbit): digital devices that users wear while doing daily activities which can record their heart rate, calories expended, steps taken, and also monitor physical and physiological parameters. These devices are usually complemented by a specific website or a mobile app where users can set goals and track their progress, which can be compared with other people as well.

Social media platforms and mobile applications are on the rise as well (Nike +, Fitocracy, Runtastic, etc.): these app enable users to track running activities, to earn points and to challenge other people. The concept underlying gamified platforms is motivation (Munson, Consolvo, 2012). Indeed, users upload their activity’s progresses and other details (weight lifted during training, distance registered after jogging, etc.). They can also see their friends’ improvements or receive comments from other people about their own results. Users are pushed to challenge themselves in order to improve their own performance, and it seems they become more physically active in order to outperform others (Zuckerman, Gal-Oz, 2014).

Starting from these premises, the overarching research aim that came up in our mind was to figuring out if the use of gamification in sport related applications might have a positive impact on people motivation towards sport participation and active life styles. However, we were conscious of the constraints related to this purpose. Indeed, to validate the efficacy of those online gamified tools on users’ lifestyle would have been required the implementation of a quantitatively compelling and extensive research project involving a large sample of the population. Therefore, in this phase of the study the main goal is rather to develop an understanding of the motives that push people to use sport related online tools. By understanding the main reasons that make people feeling good by practising with the use of online apps, should be an indirect indicator of how much sport related interfaces might induce a more active living among the population.

For this qualitative investigation we undertake a “sentiment analysis” (Bing, 2012) on Twitter data - retrieved since February 2015 ongoing - filtered by topics regarding the discussions started by people on the above mentioned platforms. Sentiment analysis is conducted following the “iSA” approach (Iacus, 2014), inspired in turn to the “ReadMe” method (Hopkins, King, 2012): the software will take as input a set of tweets, the categorization scheme chosen by the researcher, and a small subset of tweets (training set) hand classified into the given categories. Then, running the algorithm through all the non-coded tweets dataset, the software will report the distribution of tweets among categories.

Preliminary remarks

The sentiment analysis is still in progress. To have significant outcomes we estimate at least three months data collection. Therefore our main results will be presented and discussed at the Conference. Nevertheless, after a draft interpretation of the semantic orientation of messages uploaded on Twitter, we found three main categories of motivations:

- 1) personal fulfilment
- 2) “voyeurism”
- 3) awareness of the importance of an active life style

Go for running and exercising with the use of an online performance tracker or doing a virtual challenge with friends or even playing an interactive adventure where users must run to complete “missions” seems to give people something to interact with, making it interesting and stimulating them to go out and keep training. These tools, platforms and applications usually produce good feelings (satisfaction, proud, improvement target, challenging), enhancing people’ physical activity experience, stimulating users to repeat it and thus leading to a positive impact on adopting an active life style.

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