Adoption of Gamified Systems: 
A Study on a Social Media Gamification Website

Gokhan Aydin, Istanbul Arel University, Istanbul, Turkey

ABSTRACT

This study aims to understand the factors affecting the attitude towards and adoption of gamified systems, which are receiving increasing interest worldwide as they can be used for attitude change and increasing user engagement in a wide range of areas. Whether individuals use these systems because they consider them useful or if there are other motivational factors deemed important are analysed. Considering the gamification applications as new technology applications, an extended technology acceptance model (TAM) is used based on existing literature to explain attitude formation and adoption of gamified systems. An online survey is carried out on a social networking gamification website (EmpireAvenue.com) and the collected data is analysed using partial least squares structural equation modelling (PLS-SEM). The findings indicate that extended TAM incorporating intrinsic motivation elements (enjoyment and playfulness) is able to explain attitudes towards and continued use intention for a gamified system.

Keywords: Gamification, Gamified Services, Partial Least Squares, PLS-SEM, TAM, Technology Acceptance

INTRODUCTION

Interest in games, and gamification is on the rise globally. The worldwide gaming industry for the year 2013 is estimated as 93 billion USD by Gartner Inc. (2013) and is expected to increase to 115 billion by 2015. Moreover technology giants like Facebook and Amazon recently acquired companies in the gaming industry worth billions of dollars. The interest towards and popularity of games also gave rise to the “gamification” concept, a term first used by Terrill (2008) in a slightly different form: ‘gameification’. Terrill (2008) defined the term as: ‘taking game mechanics and applying them to other web properties to increase engagement’. Deterding et.al. (2011) reviewed the origins of gamification and the related literature and came up with “the use of game design elements in non-game contexts” as the definition for this concept. Recently the gamification term was added to the Merriam-Webster dictionary where it is defined as: “the process of adding game or game-like elements to something (as a task) so as to encourage participation” (TIME, 2014). From the perspective of these definitions, gamification brings game elements to (typically) uninteresting areas to influence attitude and behaviour of users by encouraging

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participation or increasing involvement. These definitions also indicate that gamification concept covers a large framework (many things can be considered as game elements), so a wide range of applications can be defined as gamification. For instance common loyalty programs that reward and encourage loyalty among customers (through points etc.) can be seen as similar applications of gamification. In typical applications of gamification we can see that points, badges, leaderboards, levels, rewards, progress and feedback systems are used to motivate participants. The gamification term became popular in 2010, despite the fact that gamified approaches have been used by many organizations such as Boy Scouts for over a century and military organizations for even longer periods of time. In the last five years, gamification has become a hot topic for businesses seeing many possibilities in increasing customer involvement and even changing consumer behaviour. Gamification is promoted as a state-of-the-art tool for marketing and increasing customer engagement (Zichermann & Cunningham, 2011) despite the lack of extensive scientific research. This lack of academic interest and research on motivational and behavioural studies in gamification and its applications create an area ripe for future studies. Companies in a wide variety of industries including but not limited to air travel, retail and financial services use different applications of gamification in their operations by incorporating badges, leaderboards, point systems, achievement systems etc. In the digitized world, implementing gamified approaches can be used as a low cost tool for increasing engagement of different systems. For example SAP used gamification to increase engagement of its professional community network members and realized a 400% increase in activity (Cetin, 2013). Some organizations have preferred using gamified applications targeting their customers and some saw more benefits in targeting employees. For instance, gamification in targeting the consumers have been used for acquiring new customers (Zichermann, 2013), educating existing customers (Bray, 2014), increasing participation in loyalty programs (Bourque, 2014) and collecting feedback (Cetin, 2013). For the employees, gamification may help in increasing participation, as Microsoft experienced in searching for translation errors in its office program throughout the world (Werbach & Hunter, 2012 p.17-20), or bug-fixing of software (Korobtsev, 2014). Also gamification can be used for improving the health of employees by changing their behaviour in participating in physical activities (Terry, 2012). According to a study by Workman (2013) nearly one third of the participating employers in the US had the intention of adopting a health oriented gamification approach within the following year. Please see Chou (2013) for a comprehensive list of successful real life examples of gamification.

The outlook for gamification looks bright as Gartner Inc. (2012) predicts that by 2015, 40% of Global 1000 organizations will use gamification as the primary mechanism to transform business operations. The overall market for gamification services and applications is projected to reach to 2.8 billion USD by 2016 (M2 Research, 2012). This increasing demand for gamification and gamified systems may be related to the way people regard “games” and non-game activities such as work, daily chores, homework, fitness, etc. Games are usually considered more enjoyable and preferable whereas most non-game activities are regarded as tedious, dull activities. Bringing fun to activities and making them more enjoyable and playful provides great opportunities for companies as the games and game-like activities are not only preferred by the younger population but also adults enjoy them. For instance according to JWT Intelligence (2011) 63% of adults in the U.S. agree that making everyday activities more like a game would make them more fun and rewarding. So far, until the digital age, the limitations of the physical world restricted the engagement levels in these systems however it is now possible to reach larger groups of people with modest investments by use of the Internet and mobile technologies (Burke, 2014).

Considering the growing interest and great expectations of gamification, we should determine how and why people accept and adopt gamification and gamified systems. Understanding what