Chapter 10
Exploring the Possibilities of Artificial Intelligence and Big Data Techniques to Enhance Gamified Financial Services

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ABSTRACT

A lot of millennials have been educated in gamified schools where they played Kahoot several times per week, and where applications like Classcraft made them feel like the protagonists of a videogame in which they had to accumulate points to be able to level up. All those that were educated in a gamified environment feel it is natural and logical that gamification is used in all areas. For this reason, gamification is increasingly becoming important in different fields including financial services, bringing new challenges. Gamification allows financial institutions to provide personalized and compelling experiences. Big data and artificial intelligence techniques are called to play an essential role in the gamification of financial services. This chapter aims to explore the possibilities of using artificial intelligence and big data techniques to support gamified financial services which are essential for digital natives but also increasingly important for digital immigrants.

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INTRODUCTION

Systems that aim to support the financial management of individuals are steadily gaining importance. Fintech is an emerging phenomenon associated with the digital transformation of financial services (Breidbach et al, 2019). Digital transformation is having an important impact on financial services. Changing customer expectations, increasing regulatory complexity, the pressure to streamline operations, and other factors are driving the push for reinvention and innovation. A new era of banking has enabled systems to quickly and seamlessly integrate with new platforms and applications. Traditional banks based in physical offices and paper documents are being replaced by robust networked digital ecosystems. As King (2017) remarks, banking is no longer somewhere you go but something you do.

Fintech is fast becoming a global phenomenon, led by innovators and followed closely by academics, and now drawing the attention of regulators (Mention, 2019). One of the main drivers of this change is mobile technologies where there is a fast-growing number of Fintech applications that offer individuals an easy access to different financial and e-banking services. Another important catalyst is being the growth of purchases made from mobile devices, a change of habit accelerated by the COVID-19 pandemic. The increasing use of technology for making purchases is making users increasingly interested in using digital tools to monitor their expenses and manage their finances. Fintech based services offer individuals the opportunity to monitor their finances in a way that was not possible until now.

At the same time, gamification is increasingly becoming important and even essential in different fields, including financial services, allowing to face new challenges. Gamification has been gaining ground in the field of financial services, largely thanks to the use of technology, and is currently being applied in many areas, ranging from budgeting to investment. Gamification allows financial institutions to use the already collected data to provide personalized and compelling experiences, and has revealed as a successful method to attract customers and help them reach their saving objectives.

In this chapter the authors aim to explore the possibilities of combining Artificial Intelligence and Big Data techniques with gamified elements and procedures to enhance financial services, which are essential for digital natives like millennials, but also increasingly important for digital immigrant generations. At the end of the chapter, the main conclusions obtained are presented, as well as a discussion about possible future lines of research.

THE IMPORTANCE OF GAMIFICATION

Gamification refers to the use of gaming elements and procedures within non-game scenarios (Deterding et al, 2011). Gamification involves applying game design techniques, game mechanics, and/or game style to non-game situations to engage and motivate users and to facilitate them the solving of problems in an easy way.

Gamification is designed to be human-centred, using the principles of basic human psychology that tap into players' needs through extrinsic (based on a reward) and intrinsic (based on a person's genuine internal desire or feeling of enjoyment or happiness) motivation. As different authors highlight (Marczewski, 2015; Growth, 2016; Playmotiv, 2019), gamification elicits a physiological reaction releasing dopamine to induce feelings of accomplishment, pleasure and reward. This, in turn, motivates players to keep coming back.