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Does ease-of-use contributes to the perception of enjoyment? A case of gamification in e-banking



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ABSTRACT

The success of online games encouraged the development of gamification software in e-banking. Beside the growing trend of gamification, it is important understand how bank customers face the gamified applications, particularly as enjoyment and ease-of-use. To assess the determinants that influence the adoption of gamification in e-banking, we developed a research to propose a conceptual model that illustrates the adoption of gamified business applications by bank customers, in e-banking context. We conducted two quantitative studies (A and B) to understand how bank customers represent a gamified business software and its changes (or improvements) over time. Study A was performed in 2012 ($N = 183$), and study B in 2015 ($N = 219$). Online bank customers were invited to rate the importance of variables related to: socialness, ease-of-use, usefulness, enjoyment and intention to use e-banking systems with game features and social cues. The results show that ease-of-use and enjoyment are inter-related, and both have influence in e-banking usage. This study present theoretical ground of the conceptual model, and discuss two empirical studies, aiming to analyse the ease-of-use and enjoyment influence on bank customers. These findings will contribute directly to explain of adoption hedonic business software in e-banking.

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1. Introduction

In e-banking, gamification has an exciting role to play in driving valuable customer behaviours, making complex operations easier and enjoyable, generating engagement with new products and building customer loyalty. By increasing participation and loyalty, banks will necessarily get more money from customers, in theory allowing them to provide better rates. Gamification also has the potential for changing customers' attitudes toward money by making, financial management fun, and eased the financial literacy knowledge. Gamification can be applied to get the operation of e-banking more fun and engaging and to drive specific consumer behaviours, like increasing savings or investments in warrants or mutual funds.

Despite the high potential of gamification in e-banking, only a few works have explored the perceptions of bank customers about such applications, particularly, in what concerns to some variables

(such as ease-of-use, socialness, usefulness, enjoyment) and the way they can influence the usage of e-banking by bank customers.

Research on the use of online game design elements in non-game contexts (gamification) may have significant implications in the increase of internet usage and on customers' loyalty for online businesses in general (e.g. Childers, Carr, Peck, & Carson, 2001; Holzwarth, Janiszewski, & Neumann, 2006; Hsu & Lu, 2004; Teo & Noyes, 2011). As people adopt online games, advanced game mechanics with new features are developed to enthuse and captivate players to stay for longer time in online gaming websites (e.g. Choi & Kim, 2004). This is also important for online businesses, namely in e-banking, to ensure that bank customers visit their business applications repeatedly, denoting increasing loyalty and reducing the offline transactions (Wu, Chen, Chen, & Cheng, 2014). The monetary value of a branch transaction is approximately 20 times higher than a mobile transaction, and more than 40 times higher than an online transaction (CEB TowerGroup, 2012).

Despite the speedy growth of internet users and cited the benefits of using internet banking, the number of internet banking users has not climbed up as strongly as expected, mainly due a lack of website usability and ease of use (Yoon & Steege, 2013). E-

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banking customers still face usage problems. In 2013, almost 40% of USA bank customers still did not use online channels (Pew Research Center, 2014). If bank customers are not willing to visit a website, its business value becomes worthless, despite its technical or managerial assets (Rose, Khoo, & Straub, 1999).

The e-banking usage is not an exciting activity, especially when performing complex financial transactions (Lassar, Manolis, & Lassar, 2005). In addition, financial products and services have become increasingly accessible to the general population. However, the availability of investment products such as stocks and mutual funds proves to be very complex and hard to understand for an average individual, who has little or no financial education (Lusardi & Mitchell, 2014). Banks are known for developing innovative internet strategies (Singer, Baradwaj, Flaherty, & Rugemer, 2012). The customers, are ready to adopt e-banking if banks provide innovated and diverse financial process, such as offering attractive experiences that motivate to pass more time online; this would permit users to view new offers and buy more (Dixit & Datta, 2010). Gamification, also delivers the potential to shift customers' attitudes in relation to money and investments, by improving financial literacy and using game elements/characteristics in e-business applications. Organizations begin to use gamification in their businesses, with the purpose to teach, persuade, and influence the employees/customers in many different activities, as synthesized in the following examples: 1) BBVA Game, aims to promote the use of online banking, allowing customers to win points they can exchange for gifts and entries to prize draws; 2) Play Moolah, a game based technologies to engage and educate its target audience on financial literacy; 3) Mint.com, uses gamification's features to help users to understand their spending habits and budget allocation. Thus, using appropriate gaming elements and dynamics, gamification, provide bank customers with a play and attractive activity to execute their financial transactions, with bare and leisurely process, more understandable rules to observe, and easier to learn how it work the financial product complexity, without changing the compliance and regulation patterns.

The online games have been rather successful in keeping up an extremely high grade of customers' loyalty, almost to the stage of addiction (Lewinski, 2000). Thus, in such condition, users frequently keep playing the same online game repeatedly. The games and social cue features, that lead users to embrace the software as more enjoyable and ease-of-use, may also lead to increase their commitment in relation to other online businesses applications, such as those associated with e-banking.

In the context of an electronic bank service, hypotheses about the relationships between aforementioned variables (socialness, ease-of-use, usefulness, enjoyment and intention to use) are investigated by means of a quantitative study, after the usage of e-banking software gamified. In fact, users play online games primarily to have a good experience, of enjoyment (Shapiro & Varian, 1999). We contend that in a business software environment with a gamification context, the perceived ease-of-use has a positive influence on the enjoyment, and can stimulate customers to use more the e-banking systems, also improving their financial literacy knowledge, through social cues. Subsequently, customers tend to feel more enjoyment, and become more loyal to the bank.

The e-banking software failure is omnipresent, and the absence of bank customer acceptance to use the online channel, instead the offline channel (face-to-face relationship), is still facing difficulties, mainly due to a lack of ease-of-use and enjoyment. Therefore, a full understanding of the variables that influence the acceptance of e-banking customers are important, especially the influence of enjoyment perception - due to the game characteristics developed

in business applications.

Studies related to ease-of-use and enjoyment are not consensual. Some researchers state perceived enjoyment has an antecedent of perceived ease-of-use (e.g. Agarwal & Karahanna, 2000; Venkatesh, 1999, 2000; Venkatesh, Speier, & Morris, 2002; Yi & Hwang, 2003). Others conclude that perceived enjoyment is only a consequence of perceived ease-of-use (e.g. Igbaria, Parasuraman, & Baroudi, 1996; Teo, Lim, & Lai, 1999; Van der Heijden, 2004). So, the relation between ease-of-use and enjoyment can be problematic, mainly in the case of hedonic software with business purposes, like gamification. There may also be some misunderstanding about the game mechanisms, elements, and other characteristics that should be developed, in the business applications, to influence the bank customers to use more the e-banking systems. These facts lead us to the main research question in the present research:

How ease-of-use and enjoyment may influence the bank customers to use e-banking with the gamified business software?

To answer this question, we conducted two quantitative studies: study A, in 2012, and B, in 2015, using gamified business applications in e-banking context. In study A, we investigated the perceptions of bank customers that use a gamified application to buy and sell mutual funds. In study B, we explored the perceptions of bank customers after using a buy and sell software for warrants. The data were collected through an online questionnaire (see Appendix), and it was used to test and validate a conceptual model, which we propose, based on Davis (1989), and adapted, by Wakefield, Wakefield, Baker, and Wang (2011), according to prior literature on games, socialness and enjoyment. First, we review the basic tenets of the theories that frame our studies, before proposing some hypotheses between the five variables that we consider – socialness, ease-of-use, usefulness, enjoyment, and intention to use.

2. Research and conceptual background

2.1. Research background

In essence, the game mechanics developed in the business software induce a perception of ease-of-use and enjoyment among users. The online games are the dominant entertainment form of modern times, and the game industry will continue to prosper in the years ahead (ESA, 2014). Game mechanics powerfully motivate behaviour, and can be applied outside the immersive environments of games themselves, to create engaging experiences as well as assigned rewards and recognition.

Gamification includes social cues to give a perception of socialness along with the software interaction. Software features, such interaction with Avatars or personalization processes, represent a very popular strategy in online content management and wide research in the fields of information systems (e.g. Fetscherin & Lattemann, 2008; Reeves & Read, 2009; Williams, Kennedy, & Moore, 2011), and marketing (Holzwarth et al., 2006). These software features allowed bank customers to access to personalized information, reducing customer search costs and improving the efficiency of a website (Ansari & Mela, 2003).

According to Yang, Cheng, & Luo, 2009, the factors that influence customers' loyalty are social (culture, tradition, and education), economic (information, profitability, and security) and personnel (ease-of-use, learning, enjoyment and usefulness). The online games have high social acceptance, are ease-to-use and learn, and financially profitable, transmit sensations of enjoyment, and induce some behaviours and attitudes that contribute to increase the loyalty of users (Yoon, 2009). The commercial success of computer

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