



Understanding player behavior in online games: The role of gender



Chuang-Chun Liu

Department of Health Administration, Tzu Chi University of Science and Technology, 880, Sec.2, Chien-kuo Rd., Hualien City 970, Taiwan, Republic of China

ARTICLE INFO

Article history:

Received 16 March 2015

Received in revised form 14 June 2016

Accepted 9 July 2016

Available online 25 July 2016

Keywords:

Online game

Social cognitive theory

Self-efficacy

Outcome expectations

Trust

Gender

ABSTRACT

The factors that influence the adoption of online gaming are a major topic of concern for academic researchers, online games marketers, and developers alike. By integrating a motivational perspective into the social cognitive theory (SCT), the research model in this study captures both internal (self-efficacy) and external (social influence) factors when explaining and predicting gamers' outcome expectations, trust, and intention to play online games. Moreover, this study investigates the moderating role of gender in attaining a better understanding of the relationship between behavioral intention and its antecedents. This study finds that self-efficacy, social influence, trust, and utilitarian and hedonic outcome expectations significantly influence players' intentions to play online games. This study also presents that gender moderates the relationship between personal cognitive factors (i.e. self-efficacy, utilitarian and hedonic outcome expectations, and trust) and behavioral intentions, and between environmental influence (i.e. social influence) and behavioral intentions. The findings herein are able to help online game marketers and developers to better develop online games in order to enhance gamers' intentions to play.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

Online games have accrued immense profits and have shown promising potential to grow in recent years (Chang et al., 2013). The global market for online games is expected to grow from \$15.7 billion in 2010 to nearly \$29 billion in 2016 (DFC Intelligence, 2011). Currently, there are 700 million online gamers worldwide, which accounts for >40% of the total Internet population (Spilgames, 2013).

Online games are played over a computer network (Weibel et al., 2008; Wu et al., 2010), ranging from simple text-based games to games incorporating complex graphics and virtual worlds populated by many players simultaneously. In a modern online game, such as a massively multi-player online role-playing game (MMORPG), a large number of players concurrently interact with one another in a virtual world (Kim et al., 2005; Papagiannidis et al., 2008; Caplan et al., 2009). MMORPGs are a popular form of entertainment that provide an intense experience of immersion and attract a number of players to spend many amounts of time in virtual worlds (Hussain et al., 2015; Kuss & Griffiths, 2012; Wu et al., 2008). These players try to build online friendships and play together to complete challenging tasks through MMORPG (Huvila et al., 2010). When playing an MMORPG, players develop their own social relationships with their virtual identity in the game world (Hsiao and Chiou, 2012), which is presented in life-like 3D graphics and computer-mediated engagement with other online players (Ang et al., 2007).

Online games currently have facilitated significant changes to human behavior and social environment (Xanthopoulou and Papagiannidis, 2012). Playing online games is primarily an individual behavior, which the social cognitive theory (SCT) has commonly and extensively been applied to explain (Bandura, 1977, 1986; Compeau and Higgins, 1995a, 1995b; Compeau et al., 1999; Hill and Troshani, 2010). SCT has certain advantages when it comes to explaining online gaming, identifying human behavior as an interaction of personal cognition, environmental influence, and behavior (Bandura, 1977, 1986; Hmieleski and Baron, 2009). This study uses SCT as a base to investigate the determinants of player behavioral intention in relation to online games. This study offers useful insights into the personal cognition, environmental influence, and behavior of online game players. Incorporating both internal factors (self-efficacy) and external factors (social influence) into SCT can provide better explanations and predictions of gamers' adoption of online games.

The issue of gender has been discussed in the field of information systems (IS), such as information technology (Ahuja and Thatcher, 2005), web (Sanchez-Franco, 2006), Internet service providers (Sanchez-Franco et al., 2009), instant messaging (Debrand & Johnson, 2008), e-commerce systems (Hwang, 2010), email (Debrand & Johnson, 2008) and blogs (Chai et al., 2012; Zhang et al., 2009). In the past, females have exhibited lower Internet frequency usage than males, because they were more likely to be computer phobic (Agbatogun and Banjo, 2010; Igbaria and Chakrabarti, 1990). Despite this, the past few years have shown an increase in Internet usage by females (Schumacher and Morahan-Martin, 2001). According to a survey from MIC (2013), more and more females are playing online

E-mail address: ccliu0406@mis.ccu.edu.tw.

games, and the market share of online gaming by females is showing an increasing trend.

This study thus proposes that gender plays an interesting role in the context of online gaming and looks to extend SCT's engagement with gender by examining the impact of internal factors (self-efficacy) and external factors (social influence) in the context of online gaming. The current study explains how the results fit with the theoretical basis in order to further our understanding of the impact of personal cognitive factors (i.e., self-efficacy, utilitarian and hedonic outcome expectations, and trust) and environmental influence (i.e., social influence) on the adoption of online games by males and females. Males and females are generally motivated to play online games for different reasons. Therefore, providing more detailed results on the adoption of online gaming by males and females is becoming increasingly important for academics, online game marketers, and developers.

Gender plays a major role in the perceptions and acceptance of online games, but few empirical studies have explored the gender differences in the perception and acceptance of online games. Moreover, little empirical research has discussed the trust construct in the context of online games. Therefore, this empirical study applies and extends SCT with trust and gender to explore the gender differences in the perceptions and acceptance of online games. This study focuses on the gender differences and moderating effects in online game playing based on SCT, making it an initial study to present the SCT of gender development and differentiation in the context of online games.

Gender differences may also exist in relation to the behavior of online gamers. As such, this study incorporates gender into the model and examines its role throughout this research. This study tests how gender moderates the relationship between behavioral intention and its antecedent in the online games context. This study evaluates whether gender influences the strength of the relationships between an online gamers' self-efficacy and behavioral intentions, between utilitarian and hedonic outcome expectations and behavioral intention, between trust and behavioral intentions, and between social influence and behavioral intention. The findings of this study are expected to provide new insights into the roles played by each of these critical variables. The hypothesized model is empirically validated using data from a survey of online gamers. The model and its hypotheses are examined via a structure equation model (SEM). This study then discusses the results, contributions, and implications and finally offers directions for future research.

2. Research model and hypothesis

Fig. 1 illustrates the research model proposed in this study. In order to explore players' behavior in online games, this empirical study develops a model based on SCT that incorporates both internal and external motivational perspectives in the context of online games. SCT is a widely accepted model for validating individual behavior (Compeau and Higgins, 1995b). This study is concerned with the role of internal factors (self-efficacy), external factors (social influence), utilitarian outcome expectations, hedonic outcome expectations, and trust on online game players' intentional behavior. Furthermore, gender differences play an important role in how information technologies (IT) are adopted and accepted (Gefen and Straub, 1997; Sanchez-Franco, 2006; Venkatesh and Morris, 2000) and are potentially critical to our understanding of IT (Gefen and Straub, 1997). They could play an important role in determining how males and females make decisions about adopting online gaming (Venkatesh and Morris 2000). Research on gender differences indicates that males tend to be more highly goal-oriented than females (Venkatesh et al. 2003), while to the contrary, females are more aware of other people's feelings and emotions (Sanchez-Franco, 2006). Additionally, males typically have higher levels of online game self-efficacy than females (Busch, 1995; Whitley, 1997). Females depend on others more than males (Awad & Ragowsky, 2008), whereas males are more likely to trust a website than females (Cyr and

Bonanni, 2005). By examining the moderating effects of gender, this study highlights more specific perspectives on players' intentional behavior.

2.1. Social cognitive theory

SCT spotlights the critical functions of human's cognitive abilities (Lee et al., 2012). The social cognitive theory posits that self-efficacy has a direct impact on outcome expectations (Bandura, 1982), since "the outcomes one expects derive largely from judgments as to how well one can execute the requisite behavior" (Bandura, 1978). Several IS studies have suggested a significant relationship between self-efficacy and outcome expectations (Akbulut and Looney, 2007; Chang et al., 2011; Hsu et al., 2007; Johnson and Marakas, 2000; Lam and Lee, 2006; Lin and Huang, 2008). According to the expectancy theory, motivation is regulated through the expectation that an action will produce a certain outcome and the value of those outcomes (Vroom, 1964). If people believe they are able to perform an action with great skill in a given context (e.g., using an information system), then they will be more likely to expect positive outcomes than those who doubt their capabilities (Compeau et al., 1999). In the context of online games, self-efficacy reflects a player's beliefs about his or her capability to play online games. This study identifies two types of outcome expectations that determine the playing of online games: utilitarian and hedonic. Utilitarian outcome expectations refer to expectations of change in image and rewards, such as upgrades or prizes; while hedonic outcome expectations refer to expectations of enjoyment, fun, and pleasure. People who believe they are able to play online games with great skill are more likely to expect positive outcomes.

SCT argues that anxiety reduction could increase computer self-efficacy, which could be associated with the overall online trust of completing the transaction (Bandura, 1986; Hwang and Kim, 2007). The more self-efficacious customers are with an e-marketer, the more favorable expectations they are likely to have, and the more they are likely to trust the e-marketer (Kim and Kim, 2005). Online games self-efficacy, as a specific self-efficacy, is affected by the degree to which one believes in one's overall competence to effect performance across a wide variety of achievement situations. Therefore, this study proposes the following hypotheses.

H1. Self-efficacy is positively related to utilitarian outcome expectations.

H2. Self-efficacy is positively related to hedonic outcome expectations.

H3. Self-efficacy is positively related to trust.

Self-efficacy is predicted to be a significant precursor to the intention of IT use (e.g., computer use, KMS use, blog use, Internet use etc.). This hypothesis is supported by several IS studies (Chiu et al., 2006; Compeau et al., 1999; Hsu and Chiu, 2004; Lam and Lee, 2006; Lin and Huang, 2008; Lin and Huang, 2010; Lu and Hsiao, 2007). In the Internet context, Lam and Lee (2006) studied older adults who were offered computer training for the first time. At the end of the training, their intention for future Internet use was measured. They evidenced the relationship between self-efficacy and intention to use the Internet. In the online games context, this study expected that the intention to play online games and self-efficacy will be directly related, since this study is more likely to attempt and persist in behavioral intentions when it considers the capability of performing a given task (Nagygyörgy et al., 2013). Therefore, this study proposes the next hypothesis.

H4. Self-efficacy is positively related to the intention to play online games.

Social influence is the extent to which members of a reference group influence one another's behavior and experience social pressure to perform particular behaviors (Kelman, 1958). Social influence refers to "the

Download English Version:

<https://daneshyari.com/en/article/5037166>

Download Persian Version:

<https://daneshyari.com/article/5037166>

[Daneshyari.com](https://daneshyari.com)