Chapter 74

Users' In–Game Purchase Intention:
The Effects of Flow Experience and Satisfaction

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ABSTRACT

During the recent times, the majority of the mobile game revenue comes from in-game features/products. In the recent past, many studies were conducted to study the factors affecting mobile game adoption. However, research on the factors driving purchase of virtual goods during mobile gaming is scarce. This study with the foundation on flow theory and theory of consumption values aimed at studying the interrelationships among the constructs to know the mobile game users' in-game purchase intention. A 10-factor research model was developed and tested empirically. For this, data were obtained from 367 high school and college students. Structural equation modelling with the aid of AMOS software was used to analyse the data. Users' gaming flow experience and satisfaction were found to exert a positive effect on intention to buy mobile in-game items. In addition, the study offers academic and practical implications of the variables affecting the decision-making behaviour of mobile gamers. Further avenues applicable for future research were also discussed in the concluding literature.

1. INTRODUCTION

Mobile gaming applications have changed the online gaming industry radically in the recent past. The burgeoning mobile gaming market growth is attributed to affordable price of smartphones, mobile data packs (Anil Kumar et al., 2019) and access to internet (Jeo Parker, 2019). Mobile gaming industry is expected to reach $ 1.1 billion mark by 2020 from $ 290 million from 2016 (Shouvik Das, 2019). As

per the statistics in 2019, mobile games are popular among the young generation and it was found that they spend 17.1% of their total time daily and is expected to increase to 19.5% by 2021 (Mansoor Iqbal, 2020). India, being one of the leading markets for mobile gaming applications has generated 60% of global revenue in 2019 in online gaming and is expected to grow 2.9% by 2024 (Robert Williams, 2020). Further, Virtual goods or the mobile in-game items that generate additional revenue for mobile gaming industry (Hamari, 2015).

Virtual goods refer to "objects such as characters, items, currencies and tokens that exist inside online games" (Lehdonvirta, 2009). These are the in-game items include coins, extra lives, outfits, skipping stages, ammunition etc. (Hamari, 2015). Further, Lin & Sun (2007) distinguished virtual goods into two types: functional and decorative. Functional based virtual goods elevate the game users' competence whereas decorative describes the aesthetic appearance of the game. Gamers buy virtual goods during game play to reduce boredom and derive a sense of enjoyment (Hanner & Zarnekow, 2015). The online gamers purchase virtual in-game items as these game items engage and augment the online game players' immersion levels during the game play (Drell, 2013) for a better gaming experience. Online gamers use real money to purchase these goods. The new phenomenon has opened up challenging avenues for research on the user attitudes and corresponding behaviour while they are engaged on mobile gaming platforms.

Prior studies focussed on the mobile applications context focussed on the factors - the flow experience (Hoffman & Novak, 2009), user satisfaction (Lee et al., 2018), game engagement (Hamari et al., 2016); continuance intention to play the game (Liao et al., 2016). Recent studies by Hsiao et al. (2019) had shown the influence of perceived value, satisfaction leading to in-app purchase intention in Pokeman Go mobile game and in-game purchase (Jang et al., 2019). There is a wide research gap in factoring the mobile in-game purchase intentions (flow experience) and user satisfaction (user-related factors) and their ensuing effect on in-game purchase intention. Studies on purchase behaviour of virtual goods are very limited (Huang et al., 2017).

The current research tries to address this gap through three research questions:

1. What is the effect of antecedents of flow – telepresence, skill and challenge – on mobile gaming flow experience?
2. What is the effect of perceived value dimensions on mobile game user satisfaction?
3. What is the effect of flow experience and user satisfaction on individuals' in-game purchase intention?

For this, the study examines the antecedents of flow experience based on flow theory, and effect of value dimensions on user satisfaction. In turn, it finally examines the effects of flow experience and user satisfaction on in-game purchase intention. In the present study, we integrated flow theory and TCV to build our research model to study the users' in-game purchase intention on mobile gaming applications.

Theory of consumption values has been widely accepted to study customer satisfaction through value based dimensions (Kim et al., 2016; Hsiao et al., 2019). Further, flow theory is widely applied to study user behaviour. Flow is defined as a psychological state in which an individual feels pleasant when he or she is absolutely involved and absorbed in an activity (Csikszentmihalyi, 1975), deriving enjoyable experience (Tobert & Moneta, 2013), loss of self-consciousness (Pelet et al., 2017). The relationship between flow experience, satisfaction and intention has been empirically validated using flow theory (Gao et al., 2015; Chang, 2013; Lee et al., 2018).

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