Paying While Playing: Examining the Role of In-App Engagement on In-App Purchases

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The fantasy sport industry in Canada and United States boasts 59.3 million users in 2017 who exceed spending $1 billion annually (FSTA, 2018). While gamification is a successful way to engage fans in a digital media environment (Fisher, 2013), understanding user’s in-game purchase behavior is essential for fantasy sports organizations to survive. Research related to fantasy sports has mainly identified different motivations to engage in fantasy sports (Dwyer et al., 2018) without providing a deeper understanding of the in-game behaviors after users start to engage in fantasy sports. The current engagement literature (Lounis et al., 2013) shows that the more a user engages in a product, the more that user is likely to make purchases. The current research contributes to fantasy sport literature by analyzing behavioral data of fantasy football users with a focus on in-game purchases and examining different gamification mechanisms.

Self-determination theory (SDT) explains that an individual’s subjective experience determines their behavior (Ryan & Deci, 2008). According to SDT, the key sport consumer motives of performance (aesthetic value), excitement (novelty), and esteem (challenge) represent an autonomy motivational orientation that regulates the desire to engage in sport consumption activities. This leads to the following research question: How do different gamified engagement activities within a fantasy sport application influence in-game purchases?

Actual behavioral data of users of a fantasy sport platform was provided by the developer. Literature on online shopping shows that certain customers are skeptical about purchasing via online platforms because of financial and psychological risks (Forsythe & Shi, 2003). Thus, to examine in-game purchase behavior of users, users who had not made any in-game purchases were omitted from the study. Multiple linear regression was applied using R software on a sample of 1,132 active users. The dependent variable was total expenditure, measured by analyzing total in-game spending done by the users. The independent variables were user’s engagement levels based on respective experience points gained while playing the game, total number of achievements unlocked, and total in-game matches played. Regression analysis revealed Experience Points ($β=-0.022$), Total Achievements ($β=3.043$), and Matches Played ($β=0.303$) explained 21.5% of the variance in Total Expenditure of users ($p < 0.001$).

The results support and refute previous engagement literature. Notably, the more users played and the more gamified achievements they obtained the more they would spend, highlighting the influence of behavior and extrinsic rewards (Lounis et al., 2013; Zichermann & Linder, 2010). Additionally, achievements may influence users’ esteem, supporting propositions of SDT (Deci & Ryan, 1985a). However, an unexpected finding related to experience points revealed a negative relationship for total in-app expenditure suggesting that users who earn more experience points by engaging in different activities within the app spend less money. This requires further investigation to understand this relationship. Overall, the current behavioral data provides initial evidence of the significance of gamified engagement activities within a fantasy sport application on influencing in-game purchases.