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Fall 9-30-2008

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## Who Are Loyal Customers in Online Games?

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### Abstract

Recently, online games have become a highly profitable e-commerce application. The market value of online games is increasing significantly and the number of players is also rapidly growing. The potentially high usage and long duration of gamers [2] demonstrate the revenue contribution of gamers to game providers. However, in a recent large-scale panel survey [9], nearly one third of players quitted online gaming in half a year. Research is thus needed to identify who are potentially loyal players and who potentially reduce their online game usage or even quit. Such research enables game providers target the former group and take marketing actions to retain the latter group.

In online activities, flow (optimal experience with total concentration and intrinsic enjoyment) is as a prominent factor [6]. Previous studies have also found that flow experience is a key to strong intentions to play or re-play online games [4]. Flow experiences come from high playing skills and challenges [1]. Thus this study considered flow experiences, skills and challenges. Moreover, online game players reported higher scores on openness, conscientiousness and extraversion than non-players did [8], supporting that game play is associated with these three traits. Thus this study included these traits and linked them to flow experiences and online game play.

This study thus investigates the relationship among personality traits (openness, conscientiousness and extraversion), playing skills, challenges, flow experiences and the intention to play online games continuously. The sample comprised 1852 online game players. Study hypotheses were developed basing on the personality literature, learning, flow experience, and online game play. Measurement items came from those in the relevant literature. Results of four reliability indices, two convergent validity criteria, one discriminant validity criterion, and six measurement model fit indices supported the quality measurement. Structural equation model was used to test hypotheses.

The analytical results indicated that player openness and conscientiousness positively influenced playing skills. Skills and challenges positively influenced flow experiences, which positively influenced the intention to play online games continuously. Moreover, player extraversion directly influenced the intention to play online games continuously. Game providers are thus recommended to target prospective customers who are high in openness, conscientiousness and extraversion. Since students comprise a significant part of players, research findings on student personality can be applied. Students of product design were found creative [7], suggesting that they are high in openness. Natural sciences students were found accurate [3], suggesting that they are high in conscientiousness. Art and social sciences students were found sociable [5], suggesting that they are high in extraversion. Those individuals may be good target customers for game providers. Game providers can also help players improve their gaming skills, and provide some tough challenges in games.

**Keywords:** online games, personality traits, flow experiences, playing skills, challenges

\*Corresponding author, the authors thank National Science Council, Taiwan for the financial support (NSC96-2416-H-182-002-MY3).

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